



# **Rocky Flats Site Quarterly Report of Site Surveillance and Maintenance Activities Third Quarter Calendar Year 2007**

**January 2008**



**U.S. Department  
of Energy**

## **Office of Legacy Management**

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**Rocky Flats Site**

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Work performed by S.M. Stoller Corporation under DOE Contract No. DE-AC01-02GJ79491 for the U.S. Department of Energy Office of Legacy Management, Grand Junction, Colorado.

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## Acronyms and Abbreviations

Ag	silver
Am	americium-241
AOC	Area of Concern
ATV	all-terrain vehicle
Be	beryllium
BMP	best management practice
CAD/ROD	Corrective Action Decision/Record of Decision
CAS	Chemical Abstracts Service
Cd	cadmium
CDPHE	Colorado Department of Public Health and Environment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 USC 9601, et seq.)
COU	Central Operable Unit
Cr	chromium
CY	calendar year
DER	duplicate error ratio
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
ETPTS	East Trenches Plume Treatment System
FC	Functional Channel
GIS	Geographic Information System
GWIS	groundwater intercept system
Hg	mercury
HR ICP/MS	high-resolution inductively coupled plasma/mass spectrometry
IHSS	Individual Hazardous Substance Site
IM/IRA	Interim Measure/Interim Remedial Action
IMP	Integrated Monitoring Plan
LANL	Los Alamos National Laboratory
LM	Office of Legacy Management
MG	million gallons
mg/L	milligrams per liter
M&M	Monitoring and Maintenance
MSPTS	Mound Site Plume Treatment System
OLF	Original Landfill
OU	Operable Unit
pCi	picocurie
pCi/L	picocuries per liter
PLF	Present Landfill
PLFTS	Present Landfill Treatment System
PMJM	Preble's meadow jumping mouse
POC	Point of Compliance
POE	Point of Evaluation
POU	Peripheral Operable Unit
PQL	practical quantitation limit
Pu	plutonium-239,240
QA	quality assurance

RCRA	Resource Conservation and Recovery Act (42 USC 6901, et seq.)
RFCA	Rocky Flats Cleanup Agreement
RFETS	Rocky Flats Environmental Technology Site
RFLMA	Rocky Flats Legacy Management Agreement
RFS	Rocky Flats Site
RFSOG	Rocky Flats Site Operations Guide
RI/FS	Remedial Investigation/Feasibility Study
RPD	relative percent difference
SED	Sitewide Ecological Database
SEP	Solar Evaporation Ponds
SEEPro	Site Environmental Evaluation for Projects
SID	South Interceptor Ditch
Site	Rocky Flats Site
SPP	Solar Ponds Plume
SPPTS	Solar Ponds Plume Treatment System
SVOC	semivolatile organic compound
TIMS	thermal ionization mass spectrometry
TSS	total suspended solids
µg/L	micrograms per liter
U	uranium
USFWS	U.S. Fish and Wildlife Service
VOC	volatile organic compound
WQCC	Water Quality Control Commission

## Executive Summary

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) is responsible for implementing the final response action selected in the Final Corrective Action Decision/Record of Decision (CAD/ROD) (DOE 2006f) issued September 29, 2006, for the Rocky Flats Site. DOE, the U.S. Environmental Protection Agency, and the Colorado Department of Public Health and Environment have chosen to implement the monitoring and maintenance requirements of the CAD/ROD under and as described in the Rocky Flats Legacy Management Agreement (RFLMA; DOE 2007c). Attachment 2 to RFLMA defines what monitoring and maintenance are required, the frequency for each required activity, and the monitoring and maintenance locations. The requirements include environmental monitoring; maintenance of the erosion controls, landfill covers, dams, and groundwater treatment systems; and operation of the groundwater treatment systems.

The *Rocky Flats Site Operations Guide* (RFSOG; DOE 2007b), prepared by DOE-LM, serves as the primary document to guide work at the Site. The RFSOG provides details on the surveillance and maintenance needed to satisfy the requirements of RFLMA as well as best management practices at the Site.

This report addresses all surveillance and maintenance activities conducted at the Site during the third quarter of calendar year 2007 (July 1 through September 30).

Highlights of the surveillance and maintenance activities include:

- Routine pond operations and management;
- Maintenance and inspection of the Original and Present Landfills;
- Maintenance and inspection of the four groundwater treatment systems;
- Erosion control and revegetation activities;
- General Site maintenance and operations including road upgrades, fence maintenance/construction, and Site security;
- Nonroutine (project-specific) and routine (per RFLMA and the RFSOG) water monitoring;
- Ecology activities; and
- RFLMA ecological sampling.

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# 1.0 Introduction

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) is responsible for implementing the final response action selected in the *Final Corrective Action Decision/Record of Decision* (CAD/ROD) (DOE 2006f) issued September 29, 2006, for the Rocky Flats Site. Prior to the CAD/ROD, cleanup and closure activities were completed in accordance with the requirements of the *Rocky Flats Cleanup Agreement* (RFCA) (CDPHE et al. 1996). Under the CAD/ROD, two Operable Units (OUs) were established within the boundaries of the Rocky Flats property: the Peripheral OU (POU) and the Central OU (COU). The COU consolidates all areas of the site that require additional remedial/corrective actions, while also considering practicalities of future land management. The POU includes the remaining, generally unimpacted portions of the site and surrounds the COU. The response action in the Final CAD/ROD is no action for the POU, and institutional and physical controls with continued monitoring for the COU.

The *Rocky Flats Legacy Management Agreement* (RFLMA), signed March 14, 2007, superseded RFCA. RFLMA is a Federal Facility Agreement and Consent Order under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), and the Colorado Hazardous Waste Act, between DOE, the U.S. Environmental Protection Agency (EPA) Region 8, and the Colorado Department of Public Health and Environment (CDPHE). The purpose of RFLMA is to establish the regulatory framework for implementing the CAD/ROD final response action and ensuring that it remains protective of human health and the environment. The monitoring, surveillance, and maintenance activities for which quarterly, annual, and 5-year review reports are issued are included in RFLMA Attachment 2, "Legacy Management Requirements."

This report describes surveillance, environmental monitoring, maintenance, and associated operations that were conducted during the period July 1 through September 30, 2007 (third quarter of calendar year [CY] 2007). This report includes the results of surveillance (including water monitoring) and maintenance activities that were conducted under the CAD/ROD and RFLMA. These surveillance and maintenance requirements include environmental monitoring; maintenance of the erosion controls, access controls (fences), landfill covers, dams, and groundwater treatment systems; and operation of the groundwater treatment systems. This report presents all data evaluation required by RFLMA (DOE 2007c).

## 1.1 Purpose and Scope

This report is required in accordance with Section 7.0 of Attachment 2 to RFLMA. The purpose of this report is to inform the regulatory agencies and stakeholders of the surveillance, monitoring, and maintenance activities being conducted at the Site. DOE-LM provides periodic communications such as this report and through other means such as web-based tools and public meetings.

This report focuses on routine surveillance, maintenance, and monitoring activities that were conducted during the third quarter of CY 2007.

## **1.2 Background**

Surveillance, maintenance, and monitoring activities are conducted according to RFLMA. RFLMA references applicable operational, monitoring, and maintenance plans for the landfills, groundwater treatment systems, and ponds. Plans applicable to this report and referenced in the *Rocky Flats Site Operations Guide* (RFSOG) include:

- *Operations and Maintenance Plan for Rocky Flats Surface Water Control Project* (DOE 2007g)—in production;
- *Operations and Maintenance Manual for the Rocky Flats Ground Water Plume Treatment Systems* (DOE 2007e);
- *Final Landfill Monitoring and Maintenance Plan, Rocky Flats Environmental Technology Site, Original Landfill* (DOE 2006a);
- *Present Landfill Monitoring and Maintenance Plan and Post-Closure Plan* (DOE 2006b);
- *Rocky Flats Site, Colorado, Revegetation Plan* (DOE 2005b);
- *Erosion Control Plan for the Rocky Flats Property Central Operable Unit* (DOE 2007f);
- *Rocky Flats, Colorado, Site Vegetation Management Plan* (DOE 2005c);
- *Ecological Monitoring Methods Handbook* (DOE 2007i); and
- *Annual Rocky Flats Site Ecological Field Sampling Plan* (DOE 2007h).

## **1.3 Data Management**

### **1.3.1 Water Data**

Data from samples submitted to an analytical laboratory are received as both hard copy and as an electronic data deliverable. The electronic data are loaded into an Oracle®-based relational database. The environmental monitoring data are accessible using the Site Environmental Evaluation for Projects (SEEPro) application. The hard-copy analytical reports are archived in the Site records library in Grand Junction, Colorado, along with the original field data forms and other relevant hard-copy forms or documents containing project data. Well construction and lithology logs are maintained for previously drilled wells and are produced for all new wells drilled. These logs are archived in the Site records library and can also be accessed electronically via the SEEPro database and the Geospatial Environmental Mapping System.

SEEPro uses Oracle® software for data management and Microsoft Access® for data retrieval and display. It compiles water quality, air quality, field parameter, sample tracking, sample location, and water level data for groundwater, surface water, boreholes, soils, and sediment samples. Field parameter data include such information as sample location, sample date, pH, turbidity, conductivity, and temperature. Chemical information (Chemical Abstracts Service [CAS] registry numbers, analytical results, and detection limits) is also included. Specific procedures for verification of database information received from subcontractors, or input directly into SEEPro, are followed. These procedures provide quality assurance (QA) documentation, which ensures that available data have been incorporated and entered or uploaded properly into SEEPro. Data integrity is maintained with standardized error checking

routines used when loading data into SEEPro. Other procedures address database system security and software change control.

The Rocky Flats Site (RFS) field data are entered through the FieldPar field data entry system. This system is a data entry module that is compatible with the SEEPro database, and is used in the office by field personnel. Data entered into FieldPar are verified by the sampler before loading into the main SEEPro database.

Spatial information for air and water data features is located in the LM Geographic Information System (GIS) database. Some of the data features included are monitoring locations, potentiometric surfaces, plume configurations, streams/creeks, lakes/ponds, topographic contours, and historic RFS facilities. This system uses an ESRI® ArcGIS™ suite of software to store and present data. Automated monitoring locations and other sample location data features are derived from location information stored in the SEEPro database.

Analytical results for water samples for third quarter of CY 2007 are provided in Appendix A.

### **1.3.2 Ecology Data**

Ecological data have been collected at the Site for many years. Since the early 1990s ecological data have been kept in electronic files for easier access, retrieval, and analysis. In the mid-1990s, the Sitewide Ecological Database (SED) was established as a master dataset for the various types of ecological data collected at the Site. The SED is a Microsoft Access® database that contains all quality-assured ecological data for the Rocky Flats Environmental Technology Site (RFETS) from early 1993 through the end of 2001. Data that did not meet the QA objectives are not included in the database. Ecology data in the SED include vegetation monitoring, weed control and controlled burn vegetation monitoring, wildlife surveys (including birds, small mammals, frogs, insects, and fish), Preble's meadow jumping mouse (PMJM) habitat characterization and telemetry tracking, a small amount of soil characterization survey data (for revegetation issues), and a few other types of ecological data. The SED does not contain data on potential contaminants nor is it linked to any GIS or other spatial tool. The data in the SED are primarily observational or catch-and-release; they are considered raw data taken directly off of field logbooks and datasheets. The SED is not intended as a reference for the lay-person. It is a repository of quality-assured raw field data collected by Site ecologists and cannot be taken out of context of the methods used to collect the data. Data collection methods are not stored in the database, they are described in reports and field sampling plans.

From 2002 to the present, the ecology data have been stored as separate datasets by sample type, event, and year. Depending on the dataset, the data may be in a Microsoft Access® database or in a Microsoft Excel® spreadsheet format. The nonspatial electronic ecology data are stored on the Robin server at the RFS in Westminster, Colorado, or on backup electronic media.

Spatial ecology data for the RFS are available for several data types and are stored in the GIS on the Gull server in Grand Junction, Colorado. The types of ecological spatial data that are available include annual weed distribution data (for select species), annual weed control locations, biocontrol release locations, vegetation and wildlife monitoring locations (transect end points and sample points), vegetation community classifications, PMJM habitat, wetland

locations, wildfire/prescribed burn locations, PMJM and wetland mitigation work, and rare plant locations. These data are available in various ArcGIS® compatible formats. In addition to these types of spatial data, orthorectified aerial and satellite imagery is also available for the Site for different timeframes, including pre- and post-closure.

## 2.0 Site Operations and Maintenance

### 2.1 Pond Operations

During the third quarter of CY 2007, the Site performed two pond water transfer/discharges (Table 2–1). The locations of the ponds and drainage features are presented on Figure 3–1. As of June 30, 2007, Ponds A-3, A-4, B-5, and C-2, and the Landfill Pond were holding approximately 35.6 million gallons (MG) (35.9 percent of total capacity [99 MG]).

*Table 2–1. Third Quarter of CY 2007 Pond Water Transfers/Discharges*

Discharge/Transfer	Dates	Volume (MG)
Pond A-4 to North Walnut Creek	7/5–7/26/07	10.39
Pond B-5 to South Walnut Creek	7/5–7/15/07	3.13

Monthly routine dam inspections, pond level measurements, and piezometer measurements were performed as scheduled during the quarter. Semiannual movement monument and inclinometer surveys were completed during the quarter. Although the data indicate all dams are in good condition, some movement was noted at Dam B-5.<sup>1</sup> Periodic resurvey of existing staff gages was also performed.

Comprehensive dam safety inspections were performed in September 2007 by a registered professional engineer from Wright Water Engineers. Although several minor maintenance items were noted during the inspections, the inspection determined that all dams were in good condition and can be operated safely at full storage level. These inspection reports are also sent to the State Engineer to satisfy the periodic 6-year inspection regulation.

### 2.2 Landfills

The RCRA Subtitle C-compliant cover for the Present Landfill (PLF) was completed in May 2005. The engineered cover for the Original Landfill (OLF) was completed in August 2005. LM personnel initiated landfill inspections in October 2005. The Monitoring and Maintenance (M&M) Plans for the OLF and PLF were completed and approved by the regulatory agencies in February and May of 2006, respectively. The general approach for the PLF and OLF monitoring and inspections, along with the results of those inspections, are presented below.

#### 2.2.1 Present Landfill

The PLF consists of approximately 22 acres of an engineered RCRA Subtitle C-compliant cover over a former sanitary/construction debris landfill. A diversion channel surrounds the landfill and diverts stormwater runoff away from the landfill to No Name Gulch. The landfill has a passive seep interception and treatment system, installed to treat landfill seep water and groundwater intercept system (GWIS) water that discharges into the Landfill Pond. A gas extraction system was also built into the landfill and allows subsurface gas to vent to the atmosphere.

<sup>1</sup> Wright Water Engineers has suggested the installation of several additional monuments at Dam B-5 to further characterize movement and an increase from semiannual to quarterly surveys. The Site will implement these recommendations starting in December 2007.

Subsidence and consolidation at the PLF is monitored by visually inspecting the surface of the landfill cover for cracks, depressions, heaving, and sinkholes. The landfill final construction site conditions are used as a baseline for comparisons made during site inspections. In addition to the visual inspection, settlement monuments are used to evaluate the actual settlement at these specific locations compared to the expected settlement calculated in the final design. Nine settlement monuments were installed across the top of the landfill cap, with an additional six monuments located on the east face of the landfill. The monuments are monitored quarterly for the first year, and annually thereafter. The first survey of these locations was performed during the fourth quarter of CY 2006.

Inspections and monitoring tasks follow the format and protocol established in the *Present Landfill Monitoring and Maintenance Plan and Post-Closure Plan* (DOE 2006b) (PLF M&M Plan) and include groundwater and surface water monitoring, as well as monitoring subsidence/consolidation, slope stability, soil cover, vegetation, stormwater management structures, and erosion in surrounding features so that corrective actions can be taken in a timely manner. Monthly inspections were initiated in October 2005. Based on results of the second five-year CERCLA review of the Site completed in July 2007, the inspection frequency was reduced to quarterly. The PLF M&M Plan is being revised to reflect this change. The findings and observations of the inspections are presented in RFLMA-required quarterly and annual reports, which are submitted to EPA and CDPHE.

#### **2.2.1.1    *Inspection Results***

Routine PLF inspections for this quarter were performed on July 25, August 27, and September 27, 2007. An evaluation of the landfill cover vegetation was performed on July 11, August 8, and September 12, 2007. No significant problems were observed during these inspections. Refer to the completed inspection forms in Appendix C for additional information.

#### **2.2.1.2    *Slumps***

On February 13, 2007, a slump was discovered on the south-facing hillside just east of the PLF. The slump is not on the landfill but is located directly east of it. Because the slumping area is not within the boundaries of the landfill, it has been left unimproved and allowed to stabilize on its own. There have been no changes to the slumping area since the last report. The field crew will continue to closely monitor this slump, as well as watch for new ones at the PLF.

#### **2.2.1.3    *Settlement Monuments***

In late July 2006 the settlement monument locations proposed in the PLF M&M Plan were field-surveyed to correspond to the exact locations used in the waste settlement calculations. Installation of the settlement monuments at the PLF began on August 7, 2006, and was completed the fourth week of August 2006. The initial survey was completed in December 2006. Subsequent surveys were completed in March, June, and August 2007. Results of these surveys indicate settling at each monument is within the range of expected settling as published in the PLF M&M Plan (DOE 2006b).

## **2.2.2 Original Landfill**

The OLF consists of approximately 20 acres of an engineered cover over a former solid sanitary and construction debris landfill. The final cover consists of a 2-foot-thick Rocky Flats Alluvium soil cover that was constructed over both a regraded surface and a buttress fill. The original surface was regraded to provide a consistent slope. A 20-foot-high, 1,000-foot-long soil mass buttress fill was placed at the toe of the landfill. Erosion is controlled by a series of diversion berms that carry storm runoff away from the cover in lined channels. In addition, the soil cover was covered with both straw mulch and a spray-on erosion control medium called “Flexterra.” A perimeter channel collects runoff from the diversion berms and carries it away from the landfill.

Formal inspections of the OLF are conducted monthly. These inspections were initiated in June 2006 consistent with the requirements contained in the *Final Landfill Monitoring and Maintenance Plan, Rocky Flats Environmental Technology Site, Original Landfill* (DOE 2006a) (OLF M&M Plan). It was anticipated that after the first year, the inspection frequency might be reduced to quarterly for an additional 4 years. However, because repairs to the OLF cover were being planned, no change to the monthly inspection frequency was recommended in the second five-year CERCLA review completed in July 2007.

The findings and observations of the inspections are presented in RFLMA-required quarterly and annual reports, which are submitted to EPA and CDPHE. Inspections and monitoring tasks follow the format and protocol established in the OLF M&M Plan and include groundwater and surface water monitoring, as well as monitoring subsidence/consolidation, slope stability, soil cover, vegetation, stormwater management structures, and erosion in surrounding features so that corrective actions can be taken in a timely manner.

### **2.2.2.1 Inspection Results**

Routine OLF inspections during this quarter were performed on July 25, August 27, and September 27, 2007. An evaluation of the landfill cover vegetation was performed on July 11, August 8, and September 12, 2007. Refer to the completed inspection forms in Appendix C for additional information.

### **2.2.2.2 Seeps**

Seeps #4 and #7 at the OLF were evaluated during the monthly inspections as well as during unscheduled visits. Seep #7 dried out in July and ceased to flow through the rest of the quarter except temporarily after precipitation events. Seep #4 still shows areas of active groundwater seepage that is being drained by Berm #3.

Other smaller seeps showed areas of wetness only temporarily after precipitation events. None produced any surface flow.

### **2.2.2.3 Slumps**

The OLF Action Plan Phase 1 repairs were completed on August 2, 2007. The subcontractor smoothed and compacted the area of a main crack that extended below Berm #1 and into the western perimeter channel. The subcontractor then imported and compacted 227 tons of

Rocky Flats Alluvium in the area of the crack to ensure that a 2-foot cover thickness was retained as required. The west portion of Berm #1 and all of the smaller sets of cracks between Berms #1 and #3 were also filled and compacted. The subcontractor subsequently reseeded the disturbed area of the cover and secured it with erosion control matting.

Other slumps at the OLF discussed in previous reports continued to be monitored. There were no significant changes to report.

#### **2.2.2.4 Settlement Monuments**

Six settlement monuments were installed at the OLF from March to April 2007. Settlement monument D was installed on July 5, 2007, after conditions dried enough to allow installation. The remaining monument will be installed upon the completion of the OLF Geotechnical Investigation or a subsequent repair project if necessary.

The settlement monuments were surveyed in June and August 2007. Preliminary survey data indicate settling at each monument is within the range of expected settling as published in the OLF M&M Plan.

#### **2.2.2.5 Consolidation Monitors**

On September 19, 2007, 20 consolidation monitors (3-foot sections of rebar driven 2 inches into the ground and secured with a plastic cap) were installed at the OLF in the Berm #1 slump area. The monitors were surveyed on September 28. These monitors will be surveyed monthly to help evaluate movement in the slump area.

### **2.3 Groundwater Plume Treatment Systems**

Maintenance and operation of groundwater treatment systems at the Site by LM personnel began in late October 2005. The system-specific summaries below focus on tasks performed by LM.

#### **2.3.1 Mound Site Plume Treatment System**

Routine maintenance activities continued at the Mound Site Plume Treatment System (MSPTS) through the third quarter of CY 2007. These activities included weekly raking of the media and inspection of influent and effluent flow conditions.

Plumbing for the MSPTS was upgraded in 2006 when the treatment media was replaced and automated instrumentation was installed. In addition to supporting the automated collection of additional performance data, the new plumbing allows the system to be run in an upflow configuration (i.e., water enters the cell at its base, and flows upward through the media, and exits at the top). Flow through the system was changed from a downflow to an upflow configuration on September 12, 2007. See Section 3.1 for additional information.

#### **2.3.2 East Trenches Plume Treatment System**

Routine maintenance activities continued at the East Trenches Plume Treatment System (ETPTS) through the third quarter of CY 2007. This included weekly raking of the media and inspection of influent and effluent flow conditions.

Plumbing for the ETPTS was upgraded in 2006 when automated instrumentation was installed. In addition to supporting the automated collection of additional performance data, the new plumbing allows the system to be run in an upflow configuration (i.e., water enters the cell at its base, and flows upward through the media, and exits at the top). Flow through the system was changed from a downflow to an upflow configuration on September 11, 2007. See Section 3.1 for additional information.

### **2.3.3 Solar Ponds Plume Treatment System**

Routine maintenance activities continued at the Solar Ponds Plume Treatment System (SPPTS) through the third quarter of CY 2007. This included weekly inspection of the solar/battery system that powers the pump, operation of the pump, and influent and effluent flow conditions.

## **2.4 Erosion Control and Revegetation**

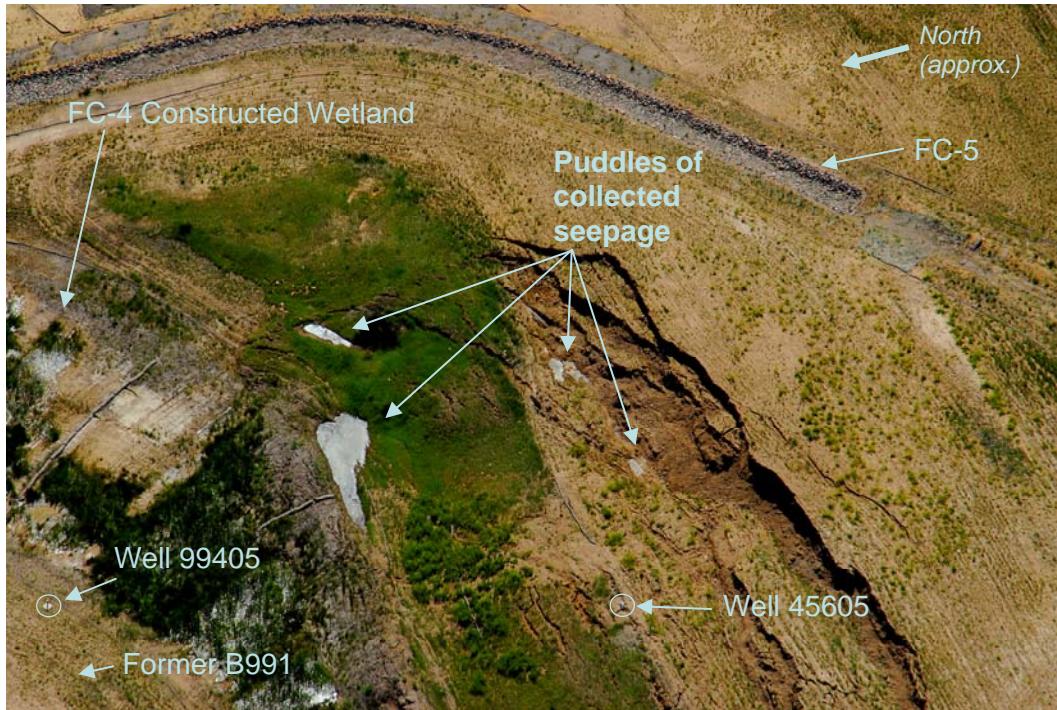
The existing erosion controls are maintained and repaired to protect the bare soil areas until the vegetation can stabilize the soil. Assessing the erosion control is especially important following high wind events that are common at the Site. Areas lacking sufficient vegetative cover were reseeded to ensure adequate establishment of the native vegetation in these areas. Additional erosion control information, specifically related to ecological matters, is covered in Section 3.2.3.

Maintenance of the Site erosion control features required continued effort throughout the third quarter of CY 2007, especially following high wind and/or precipitation events. Repairs were made to erosion wattles and matting loosened and displaced by high winds or rain. Erosion controls were installed and maintained for the various projects that were ongoing during the third quarter.

### **2.4.1 Slump South of Former Building 991**

Staff inspected the former Building 991 slump area (Figure 2–1) on July 17, 2007, with engineering and surveying subcontractors, and discussions were held with engineering support. Additional cracks indicative of continuing movement were noted, including some farther south and east; a series circling the western side of the deposit of older (pre-closure), red riprap on the hillside west of the main body of the slump was also noted. The path forward and observations from a walkdown with DOE were discussed. The ecology lead flagged the preferred line for the toe of the slope during the regrading activities that will be completed in the slump area. The surveyors assessed the proposed toe and determined where the shoulder of the new slope would be located based on a 4:1 slope ratio from the toe. The new survey data, collected July 17, will be used to refine rough estimates of excess material generated and to develop the conceptual design.

In September 2007, a conceptual design for regrading the former Building 991 slump was prepared for consultation with CDPHE. Staff reviewed the drawings, and also coordinated sampling and analysis for the well within the slump so it could be abandoned before regrading begins. In addition, CDPHE approved a RFLMA Regulatory Contact Record to document subsurface conditions and proposed final elevations to obtain approval for the regrading work for the former Building 991 area. The final design was completed and issued.



NOTES: B991 = Building 991; FC = Functional Channel. FC-4 constructed wetland includes most of the area in lower left corner of the photo, bounded on the north (left) by the 991 hillside and on the south (right) by the opposite hillside and the uplifted toe of the slump, which separates the wetland from the northernmost puddles. Fractures and scarps forming the slump are evident. Photograph taken June 14, 2007.

*Figure 2–1. Aerial Photograph Showing Eastern Portion of Building 991 Area Slump and Seepage*

## 2.5 General Site Maintenance and Operations

The COU property is being managed and maintained to protect the completed remedial activities and to facilitate completing RFLMA-required M&M activities. Assessment of the conditions is performed on both a scheduled and continuous basis.

### 2.5.1 RFS Road Upgrades

The Roads III Upgrade Project subcontract was initiated on August 20, 2007. Upgrades to the roads started on the north side of the Site and moved toward the south side. Work continued on the Roads III Project during September. Work was halted on September 13 when a road grader hit a live underground power line. The project was immediately stopped, and the necessary notifications were made. On September 25, work resumed. Construction on the last section of road along Indiana Street and Walnut Creek was completed on September 28.

### 2.5.2 Electrical Lines

On July 20, 2007, the field operations manager escorted Xcel Energy personnel while they tested transformers on the electrical lines that DOE plans to purchase. The Xcel personnel were testing

for polychlorinated biphenyls. They also tightened a sagging power line on the east side of Rocky Flats. The testing and work was completed on July 21.

In August Xcel installed a single meter to supply power to the remaining 13.2-kilovolt power line at the Site. DOE has agreed to purchase the line and all associated equipment for \$1, which will be accomplished in the near future as a personal property acquisition. DOE's subcontractor, S.M. Stoller Corporation, will need to maintain the line as necessary to ensure that two surface water monitoring stations, two air sampling stations, and one CDPHE air quality monitoring station have power.

### **2.5.3 Site Security**

#### ***2.5.3.1 Fence Maintenance***

The third quarter inspection of the COU fence and signs was completed on August 16, 2007. All postings were in place and in good condition. There were no breaks in the fence and no repairs were necessary.

#### ***2.5.3.2 Security Issues***

Security personnel continued to conduct patrols 50 percent of the time on approved interior routes and 50 percent of the time on the north and east perimeters of the site.

A member of the security force contacted the site manager on July 16 to inform her that a helicopter from Channel 4 News was flying around the Site. It was believed the helicopter was taking pictures for a story on the wildlife refuge. The helicopter did not land or cause any problems.

On the afternoon of July 25, the ecology lead intercepted a man walking from the west access gate toward the west shed. When he approached the man and asked why he was on federal property, the man said that he heard the wildlife refuge was open and he wanted to hike there. The ecology lead informed him that the Site was not open to the public yet and that he had to leave. The man left the site without causing any disturbances. A temporary sign was installed on the west gate indicating that the land is not open to the public.

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## **3.0 Environmental Monitoring**

### **3.1 Water Monitoring**

This section presents data collected to satisfy water monitoring objectives implemented at the Site in accordance with RFLMA. The RFSOG provides a guidance framework in support of conducting LM activities at the Site including monitoring. Figure 3–1 shows a map with the water monitoring locations operating in the third quarter of CY 2007.

This quarterly report presents data collected during the third quarter of CY 2007 (July through September 2007). This section includes:

- An evaluation of analytical results as required for the Point of Compliance (POC), Point of Evaluation (POE), PLF, and OLF monitoring objectives;
- A brief discussion of investigative and pre-discharge monitoring;
- A summary of RCRA groundwater monitoring at the PLF and OLF;
- A summary of groundwater monitoring at Sentinel well P210089;
- A summary of nonroutine sampling performed at groundwater treatment system influent, effluent, and performance monitoring locations at the ETPTS, MSPTS, and SPPTS; and
- A summary of nonroutine groundwater monitoring at select additional locations to support high-resolution uranium (U) analyses.

Analytical water-quality data are available in Appendix A.

#### **3.1.1 Water Monitoring Highlights**

During the third quarter of CY 2007, the water monitoring network successfully fulfilled the targeted monitoring objectives as required by RFLMA and using the RFSOG implementation guidance. The network consisted of 13 automated gaging stations, 12 surface water grab-sampling locations, 10 treatment system locations, 100 wells, 3 sediment locations, and 9 precipitation gages. During the quarter, 24 flow-paced composite samples, 10 surface water grab samples, 14 samples supporting treatment system objectives, and 13 groundwater samples were collected.<sup>2</sup>

All water-quality data at the RFCA POCs remain well below the applicable standards through the third quarter of CY 2007.

Reportable 12-month rolling average total U concentrations continued to be observed in surface water at RFCA POE monitoring station GS10, which is located in South Walnut Creek upstream of Pond B-1 in the Walnut Creek Basin.

DOE provided the initial formal notification of reportable U concentrations at POE GS10 to EPA and CDPHE on July 13, 2006. DOE first became aware of the reportable values when all U sample results were validated on July 6, 2006. This notification reported, on a 12-month rolling

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<sup>2</sup> Composite samples consist of multiple aliquots ('grabs') of identical volume. Each grab is delivered by the automatic sampler to the composite container at each predetermined flow volume or time interval. During the third quarter of CY 2007, the 24 flow-paced composites were comprised of 1,015 individual grabs.

average basis per the Integrated Monitoring Plan (IMP), a single reportable value for the last day of April 2006 (April 30, 2006; 10.19 picocuries per liter [pCi/L]). At that time, the RFCA action level for total U in Walnut Creek was 10 pCi/L, as adopted by RFLMA.

A more comprehensive water-quality evaluation was detailed in Section 2.2.1.1, “Notification and Source Evaluation for Reportable 12-Month Rolling Total Uranium Values at RFCA Point of Evaluation GS10” of the *Quarterly Report of Site Surveillance and Maintenance Activities: Second Quarter Calendar Year 2006* (DOE 2006g). The Site continues to evaluate, in coordination with CDPHE and under RFLMA, the measured U concentrations at GS10. Recent GS10 data are evaluated in Section 3.1.4.1 of this report.

All other POE analyte concentrations remained below reporting levels as of the end of the third quarter of CY 2007. Erosion and runoff controls, as well as extensive revegetation efforts, have proven to be effective in measurably reducing both sediment transport and constituent concentrations. As of the end of the third quarter of CY 2007, all of the POEs were showing plutonium-239,240 (Pu) and americium-241 (Am) concentrations well below the RFLMA standards. With the removal of impervious areas resulting in decreased runoff, the stabilization of soils within the drainages, and the progression of revegetation, acceptable water quality is expected to continue.

All surface water monitoring data for the OLF were below standards during the quarter. Monitoring data for the PLF Treatment System (PLFTS) showed effluent results for vinyl chloride that were greater than the RFLMA practical quantitation limit (PQL) during the quarter (see Section 3.1.12.4 for discussion).

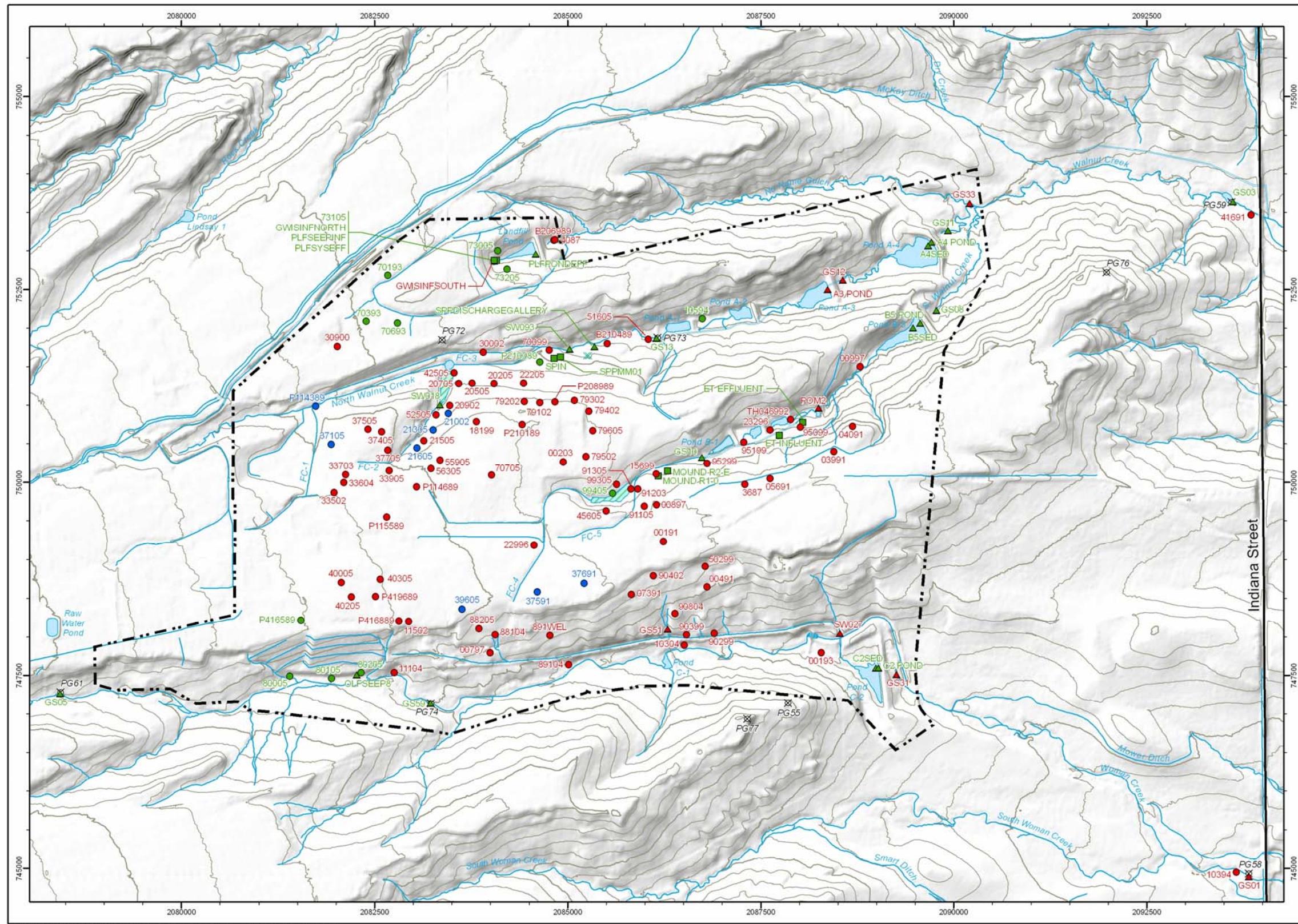
Groundwater monitoring results at the PLF and OLF will be evaluated as part of the Rocky Flats Site Annual Report of Site Surveillance and Maintenance Activities, Calendar Year 2007 (2007 Annual Report). Groundwater was monitored in accordance with RFLMA (DOE 2007c).

### **3.1.2 Use of Analytical Data**

Analytical data are evaluated statistically to meet many objectives in accordance with RFLMA (DOE 2007c). Rejected data are not included in statistical evaluations.

Surface water data from POCs and POEs are evaluated on a semimonthly schedule, and results of these evaluations are included in the quarterly reports. Groundwater data evaluations are reported annually, because the groundwater regime is less dynamic and conditions change much more gradually than is the case with surface water. However, groundwater data from Area of Concern (AOC) wells are evaluated for reportable conditions as they are received; when such conditions exist, they are described in the quarterly report as well as the annual report.

Groundwater statistics require a minimum of eight results representing routinely collected samples. A commercially available geostatistical software program (currently Sanitas™ or Visual Sample Plan) is used for these calculations. (Note: This report does not recommend any particular software; this information is merely included for the sake of completeness.)



## Water Monitoring Locations and Precipitation Gages

3<sup>rd</sup> Quarter CY07

### MONITORING LOCATIONS

- Well - Sampled
- Well - Monitored (Water Level Only)
- Well - Not Sampled
- ▲ Surface Location - Sampled
- ▲ Surface Location - Not Sampled
- Treatment System Location - Sampled
- Treatment System Location - Not Sampled
- ✖ Precipitation Gage
- ✖ SPPTS Discharge Gallery Investigation Location - Sampled

### BASE FEATURES

- Central OU Boundary
- Lake or pond
- Swamp or marsh
- Stream, ditch, or canal
- Culvert or pipeline
- Topographic contour (100-foot interval)
- Topographic contour (20-foot interval)



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1,400 700 0 1,400

STATE PLANE COORDINATE SYSTEM (FEET)  
COLORADO CENTRAL  
NORTH AMERICAN DATUM OF 1927

U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO	Work Performed by <b>S.M. Stoller Corporation</b> Under DOE Contract No. DE-AC01-02GJ79491
DATE PREPARED: December 13, 2007	FILENAME: S0383700

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Figure 3-1. RFS Water Monitoring Locations and Precipitation Gages: Third Quarter of CY 2007

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Groundwater field duplicates are omitted from statistical evaluations. Even so, samples collected on the same date but analyzed for similar constituents (e.g., total U and U isotopes) may be defined by the program as representing a real and duplicate sample result. In these cases, the two values are averaged and the average value is used for the statistical calculations. (In this example, the averaged values would be the total U reported in mass units and the sum of isotopic results that have been converted to mass units.) In addition, the Sanitas™ program uses the qualifier “D” to represent a duplicate sample to be averaged with the real sample; prior to closure, this qualifier was used to indicate the analysis had been performed at a dilution. Therefore, prior to performing statistical calculations using this program, “D” qualifiers are deleted.

Groundwater samples assigned laboratory qualifiers of J (estimated) are taken at face value, rather than being assigned a value of less than the method detection limit plus PQL. Due to the lack of universal consensus on how to handle nondetects, and consistent with previous statistical evaluations of groundwater at the RFS, nondetects are replaced with a value of 0.001. (The original intent was to replace nondetects with zero, but because some statistical methods would then divide by this value, the number 0.001 is used.)

Evaluations of U in groundwater are based on total U concentrations. In some cases, surface water data are also evaluated (e.g., at GS13, the performance monitoring location supporting the SPPTS). The latter data are typically reported as isotopic activities. These activities are converted to mass units, then summed for an estimate of the total U concentration. Conversion factors used to support these groundwater evaluations are listed in Table 3–1.

*Table 3–1. Uranium Isotope Conversion Factors Used in Groundwater Evaluations*

Isotope	Conversion Factor	Typical Activity Units	Typical Mass Units
U-233 <sup>a</sup>	9636.6 pCi/µg	pCi/L	µg/L
U-234	6235.1 pCi/µg	pCi/L	µg/L
U-235	2.1612 pCi/µg	pCi/L	µg/L
U-236 <sup>a</sup>	64.672 pCi/µg	pCi/L	µg/L
U-238	0.33614 pCi/µg	pCi/L	µg/L

Notes: <sup>a</sup>U-233 and U-236 are absent in natural U, and therefore can be used as definitive markers for anthropogenic U. The Los Alamos National Laboratory analyzes U-236 and also evaluates isotopic ratios for this purpose.

Source of conversion factors: Friedlander et al. 1981.

pCi/µg = picocuries per microgram; µg/L = micrograms per liter

### 3.1.3 POC Monitoring

This objective deals with monitoring discharges from the terminal ponds into Woman and Walnut Creeks and streamflow at the additional POCs downstream at Indiana Street to demonstrate compliance with RFLMA surface water quality standards (see Table 1 of Attachment 2 to RFLMA). Water quality data are reportable under RFLMA when the applicable compliance parameter(s) are greater than the corresponding Table 1 value(s) (see Appendix D). Terminal pond discharges are monitored by POCs GS11, GS08, and GS31. Walnut Creek is monitored at Indiana Street by POC GS03. Woman Creek is monitored at Indiana Street by POC GS01. These locations are shown on Figure 3–1. Sampling and data evaluation protocols are summarized in Table 3–2.

*Table 3–2. Sampling and Data Evaluation Protocols at POCs*

Location Code	Location Description	Sample Types/Frequencies	Analytes	Data Evaluation
GS01	Woman Creek at Indiana Street	Continuous flow-paced composites; frequency varies (target is 20–40 per year) <sup>a</sup>	total Pu, Am, and U isotopes <sup>b</sup> [TSS <sup>d</sup> ]	see Figure 5 in Appendix D
GS03	Walnut Creek at Indiana Street	Continuous flow-paced composites; frequency varies (target is 25–30 per year) <sup>a</sup>	total Pu, Am, U isotopes <sup>b</sup> , and nitrate <sup>c</sup> [TSS <sup>d</sup> ]	see Figure 5 in Appendix D
GS08	Pond B-5 Outlet	Continuous flow-paced composites; frequency varies (target is 0–19 per year)	total Pu, Am, U isotopes <sup>b</sup> , and nitrate <sup>c</sup>	see Figure 5 in Appendix D
GS11	Pond A-4 Outlet	Continuous flow-paced composites; frequency varies (target is 0–15 per year)	total Pu, Am, U isotopes <sup>b</sup> , and nitrate <sup>c</sup>	see Figure 5 in Appendix D
GS31	Pond C-2 Outlet	Continuous flow-paced composites; frequency varies (target is 0–5 per year)	total Pu, Am, and U isotopes <sup>b</sup>	see Figure 5 in Appendix D

Notes: <sup>a</sup>Frequency depends on available flow; samples are segregated by water origin (baseflow or pond discharge).

<sup>b</sup>U isotopes are U-233,234 + U-235 + U-238.

<sup>c</sup>Collected during pond discharges only; nitrate is analyzed as nitrate+nitrite as N; this result is conservatively compared to the nitrate standard only.

<sup>d</sup>Total suspended solids (TSS) is analyzed when the composite sampling period is within TSS hold-time limits.

The following sections include summary tables and plots showing the applicable 30-day and 12-month rolling averages for the POC analytes. The evaluations include all results that were not rejected through the verification and validation process. Data are generally presented to decimal places as reported by the laboratories. Accuracy should not be inferred; minimum detectable concentrations/activities and analytical error are often greater than the precision presented. When a sample has a corresponding field duplicate, the value used in calculations is the arithmetic average of the ‘real’ and ‘duplicate’ values. When a sample has multiple ‘real’ analyses (Site-requested ‘reruns’), the value used in calculations is the arithmetic average of the multiple ‘real’ analyses.<sup>3</sup>

Refer to the analytical data accompanying this document for further information.

### **3.1.3.1    Location GS01**

Monitoring location GS01 is located on Woman Creek at Indiana Street (Figure 3–1). The Woman Creek headwaters, the southern portion of the COU, and Pond C-2 contribute flow to GS01.

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<sup>3</sup> Significant differences in values for a data pair are an indication of potential problems with sample preparation and/or analysis. Under these circumstances, an applicable value to be used for comparison cannot be determined with sufficient confidence to make compliance decisions. As such, an evaluation of the duplicate error ratio (DER) or relative percent difference (RPD), depending on the analyte, is required to assess the representativeness of the sample and its usability for compliance decisions (see Section 8.2.3 of the RFSOG for discussion).

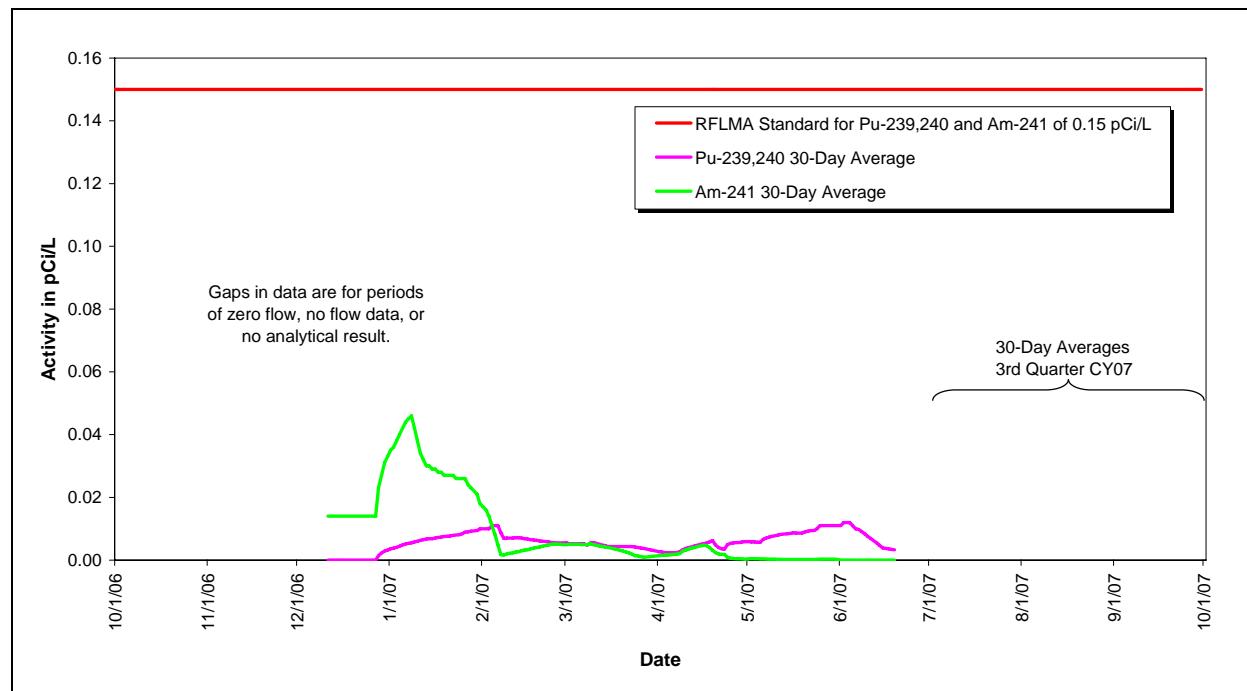
Table 3–3 shows that all of the annual average Pu and Am activities were well below 0.15 pCi/L. Additionally, the long-term Pu and Am averages (1997–2006) are well below 0.15 pCi/L. The average total U activities are all well below 11 pCi/L.

*Table 3–3. Annual Volume-Weighted Average Radionuclide Activities at GS01 for 1997–2007*

Calendar Year	Volume-Weighted Average Activity (pCi/L)		
	Am-241	Pu-239,240	Total U
1997	0.003	0.007	NA
1998	0.006	0.006	NA
1999	0.005	0.008	NA
2000	0.004	0.003	NA
2001	0.004	0.006	NA
2002	0.002	0.001	NA
2003	0.002	0.004	1.24
2004	0.003	0.002	3.56
2005	0.004	0.003	2.50
2006	0.012	0.003	4.76
2007	0.002	0.007	1.09
Total (1997–2007)	0.004	0.006	1.70

Notes: Collection of total U data began on February 3, 2003. Data through June 19, 2007.  
NA = not applicable.

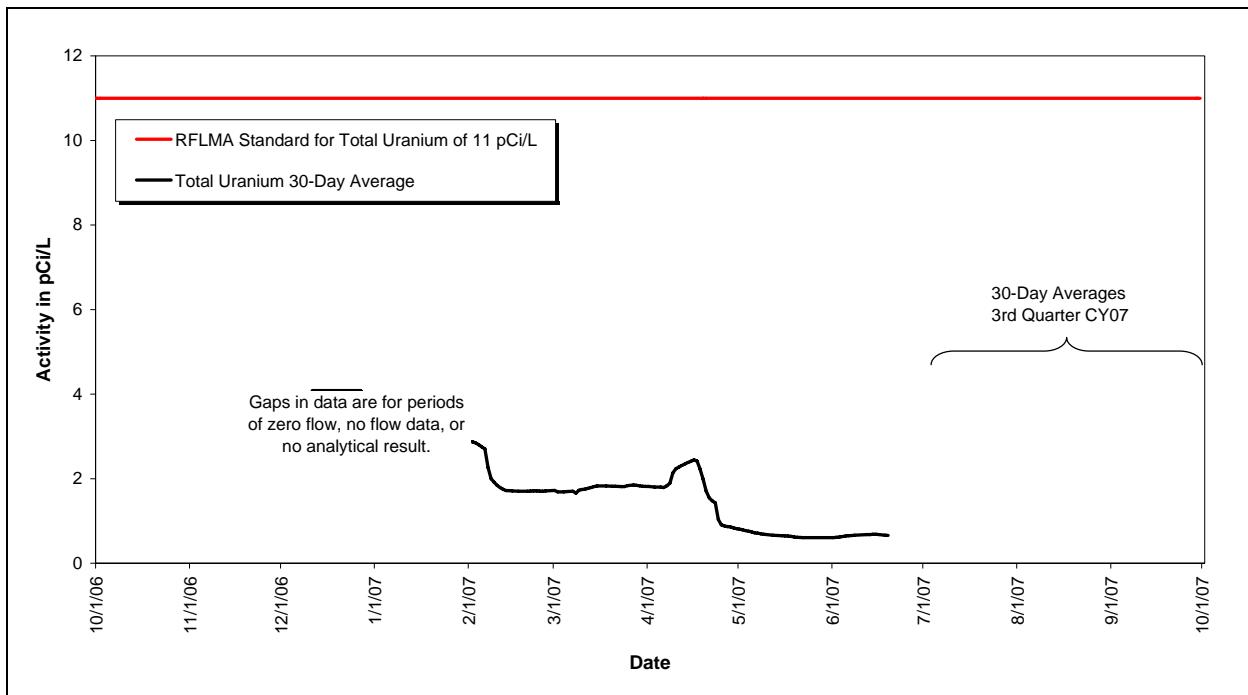
Figure 3–2 and Figure 3–3 show no occurrences of reportable 30-day averages for the quarter.<sup>4</sup>



Note: Data through June 19, 2007. There has been no flow at GS01 since June 27, 2007.

*Figure 3–2. Volume-Weighted 30-Day Average Pu and Am Activities at GS01: Calendar Year Ending Third Quarter of CY 2007*

<sup>4</sup> Data are through June 19, 2007; the composite sample started on June 20, 2007, was still in progress as of this report (see Appendix B).



Note: Data through June 19, 2007. There has been no flow at GS01 since 6/27/07.

*Figure 3–3. Volume-Weighted 30-Day Average Total U Activities at GS01: Calendar Year Ending Third Quarter of CY 2007*

### 3.1.3.2 Location GS03

Monitoring location GS03 is located on Walnut Creek at Indiana Street (Figure 3–1). The Walnut Creek headwaters, the majority of the COU, Pond A-4, and Pond B-5 contribute flow to GS03.

Table 3–4 shows that all of the annual average Pu and Am activities were well below 0.15 pCi/L. Additionally, the long-term Pu and Am averages (1997–2007) are well below 0.15 pCi/L. The average total U and nitrate+nitrite concentrations are all well below 10 pCi/L and 10 milligrams per liter (mg/L), respectively.

Figure 3–4, Figure 3–5, and Figure 3–6 show no occurrences of reportable 30-day averages for the quarter.<sup>5</sup>

<sup>5</sup> Data are through July 29, 2007; the composite sample started on July 30, 2007, was still in progress as of this report (see Appendix B).

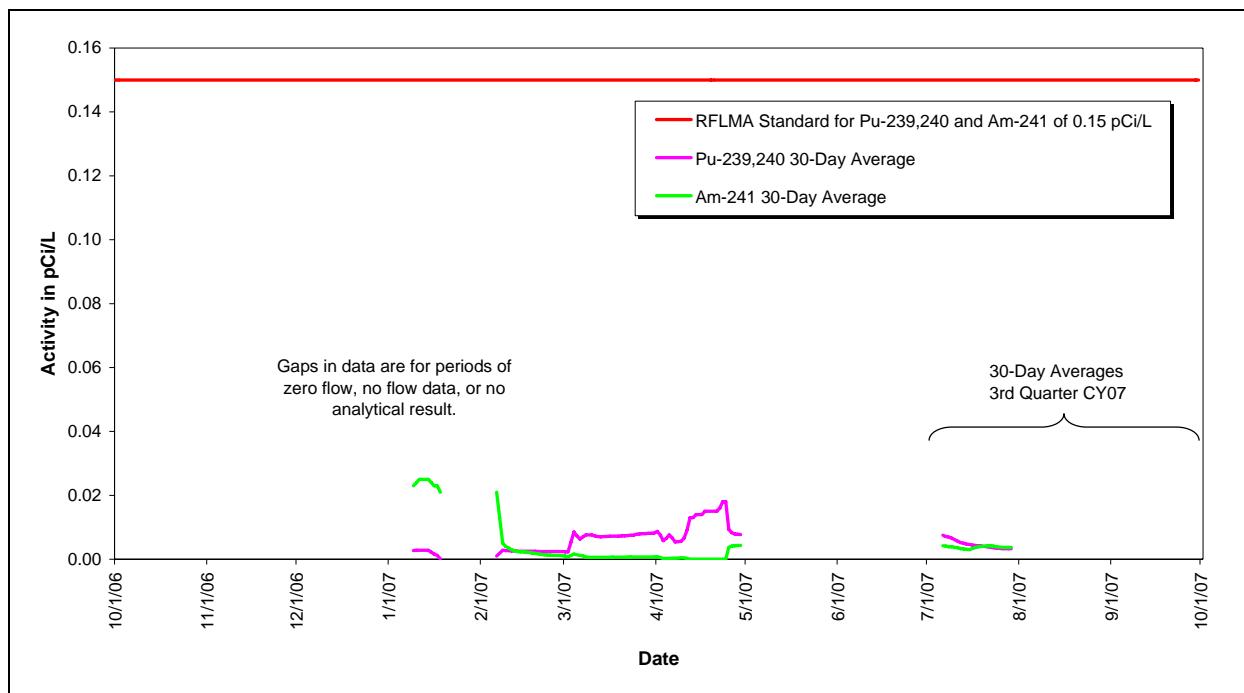
**Table 3–4. Annual Volume-Weighted Average Radionuclide Activities and Nitrate+Nitrite as N Concentrations at GS03 for 1997–2007**

Calendar Year	Volume-Weighted Average Activity (pCi/L)			Volume-Weighted Average Concentration (mg/L) <sup>a</sup>
	Am-241	Pu-239,240	Total U	
1997	0.014	0.026	NA	NA
1998	0.010	0.014	NA	NA
1999	0.009	0.015	NA	NA
2000	0.007	0.005	NA	NA
2001	0.005	0.009	NA	NA
2002	0.006	0.012	NA	NA
2003	0.005	0.006	1.79	NA
2004	0.008	0.008	1.76	NA
2005	0.022	0.008	3.95	NA (no pond discharges after 10/13/05)
2006	NA (no flow)	NA (no flow)	NA (no flow)	NA (no pond discharges)
2007	0.002	0.006	3.76	2.34
Total (1997–2007)	0.009	0.012	2.42	2.34

Notes: Collection of total U data began on November 5, 2002. Data through July 29, 2007.

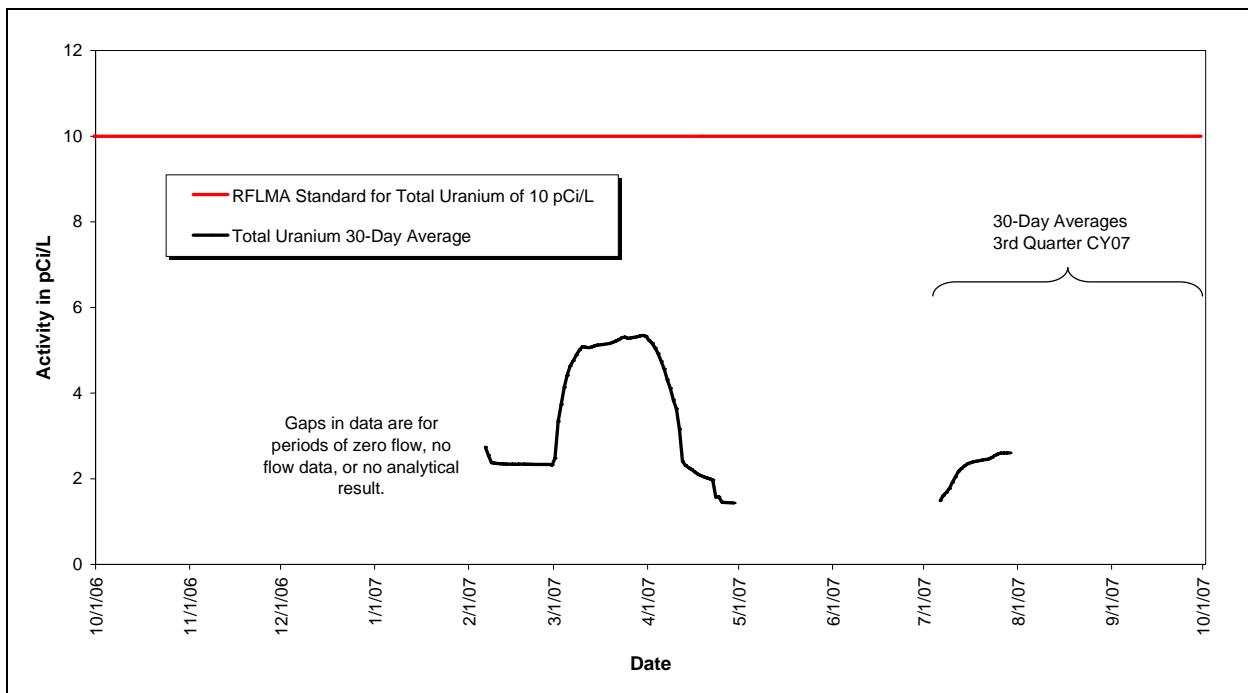
NA = not applicable.

<sup>a</sup>For pond discharge periods only; nitrate+nitrite as N sampling began on October 13, 2005.



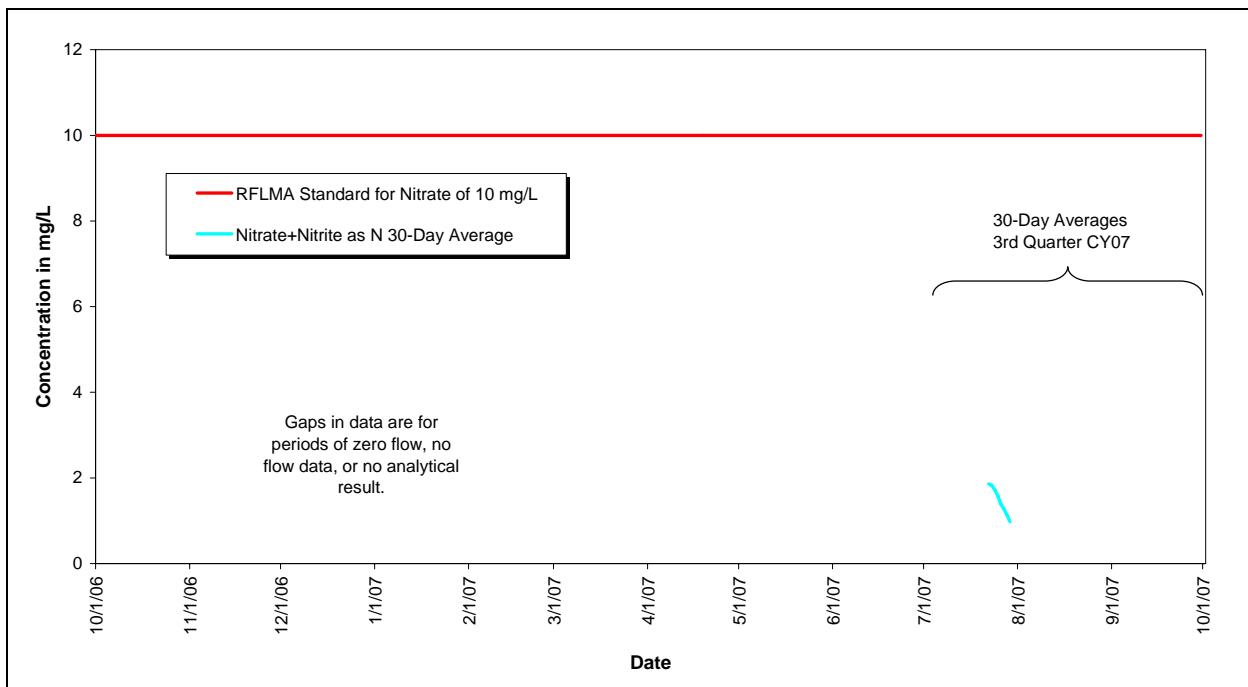
Note: Data through July 29, 2007.

**Figure 3–4. Volume-Weighted 30-Day Average Pu and Am Activities at GS03: Calendar Year Ending Third Quarter of CY 2007**



Note: Data through July 29, 2007.

*Figure 3–5. Volume-Weighted 30-Day Average Total U Activities at GS03: Calendar Year Ending Third Quarter of CY 2007*



Note: Data through July 29, 2007.

*Figure 3–6. Volume-Weighted 30-Day Average  $\text{NO}_3 + \text{NO}_2$  as N Concentration at GS03: Calendar Year Ending Third Quarter of CY 2007*

### **3.1.3.3 Location GS08**

Monitoring location GS08 is located on South Walnut Creek at the outlet of Pond B-5 (Figure 3–1). The central portion of the COU contributes flow to Pond B-5.

Table 3–5 shows that all of the annual average Pu and Am activities were well below 0.15 pCi/L. Additionally, the long-term Pu and Am averages (1997–2007) are well below 0.15 pCi/L. The average total U activities have shown recent increases due to contributions from GS10 (see Section 3.1.4.1). Nitrate+nitrite concentrations are well below 10 mg/L.

Figure 3–7, Figure 3–8, and Figure 3–9 show no occurrences of reportable 12-month rolling averages for the quarter.

*Table 3–5. Annual Volume-Weighted Average Radionuclide Activities and Nitrate+Nitrite as N Concentrations at GS08 for 1997–2007*

Calendar Year	Volume-Weighted Average Activity (pCi/L)			Volume-Weighted Average Concentration (mg/L) <sup>a</sup>
	Am-241	Pu-239,240	Total U	
1997	0.008	0.006	1.69	NA
1998	0.006	0.008	2.33	NA
1999	0.015	0.046	1.38	NA
2000	0.029	0.047	0.93	NA
2001	0.004	0.006	1.24	NA
2002	0.003	0.002	0.68	NA
2003	0.006	0.026	1.37	NA
2004	0.009	0.009	1.24	NA
2005	0.021	0.008	6.11	NA (no pond discharge after 10/13/05)
2006	NA (no discharge)	NA (no discharge)	NA (no discharge)	NA (no discharge)
2007	0.002	0.003	8.45	0.38
Total (1997–2007)	0.012	0.022	1.71	0.38

Notes: Data through September 30, 2007.

NA = not applicable.

<sup>a</sup>Nitrate+nitrite as N sampling began on October 13, 2005.

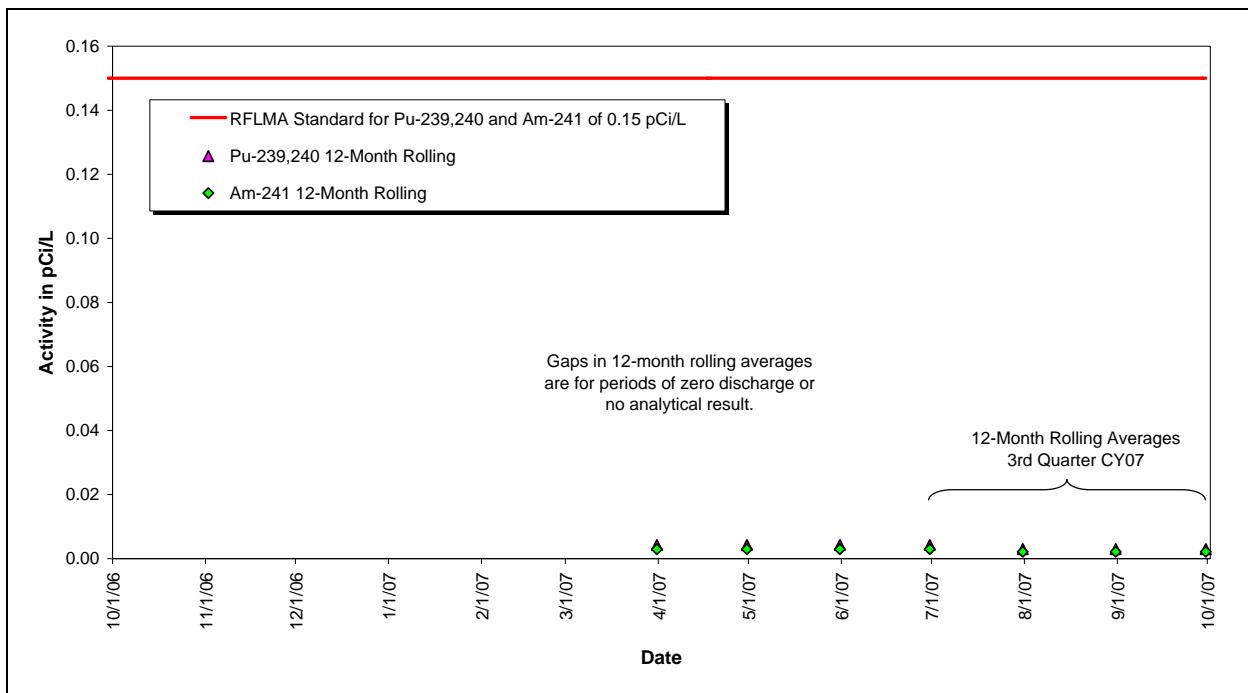


Figure 3-7. Volume-Weighted 12-Month Rolling Average Pu and Am Activities at GS08: Calendar Year Ending Third Quarter of CY 2007

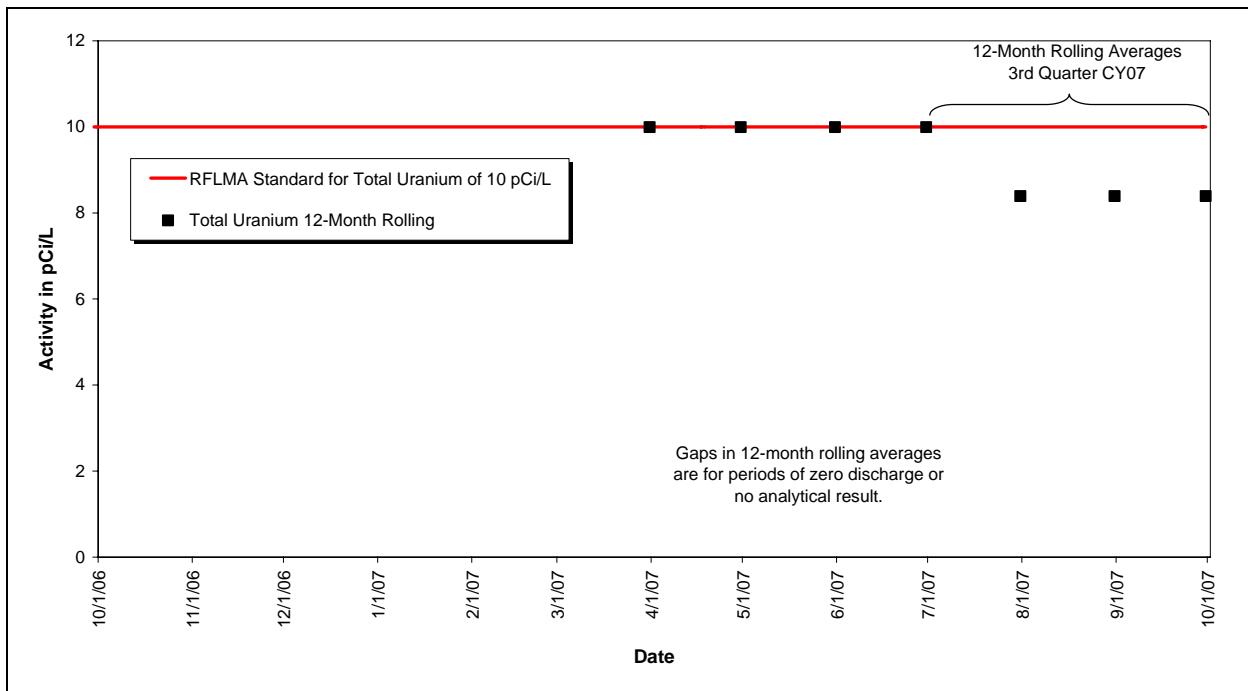
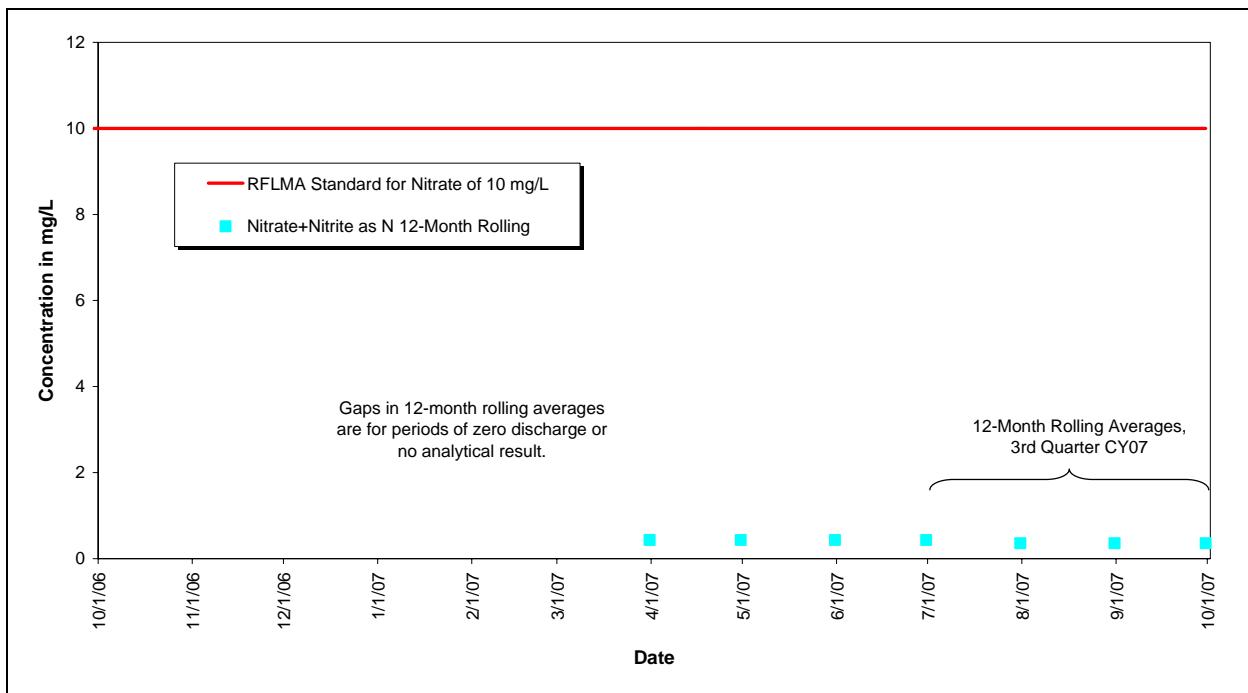


Figure 3-8. Volume-Weighted 12-Month Rolling Average Total U Activities at GS08: Calendar Year Ending Third Quarter of CY 2007



Note: Nitrate+nitrite as N 12-month averages are conservatively compared to the nitrate standard only.

*Figure 3–9. Volume-Weighted 12-Month Rolling Average Nitrate+Nitrite as N Concentrations at GS08: Calendar Year Ending Third Quarter of CY 2007*

### 3.1.3.4 Location GS11

Monitoring location GS11 is located on North Walnut Creek at the outlet of Pond A-4 (Figure 3–1). The northern portion of the COU contributes flow to Pond A-4.

Table 3–6 shows that all of the annual average Pu and Am activities were well below 0.15 pCi/L. Additionally, the long-term Pu and Am averages (1997–2007) are well below 0.15 pCi/L. The average total U and nitrate+nitrite concentrations are all well below 10 pCi/L and 10 mg/L, respectively.

Figure 3–10, Figure 3–11, and Figure 3–12 show no occurrences of reportable 12-month rolling averages for the quarter.

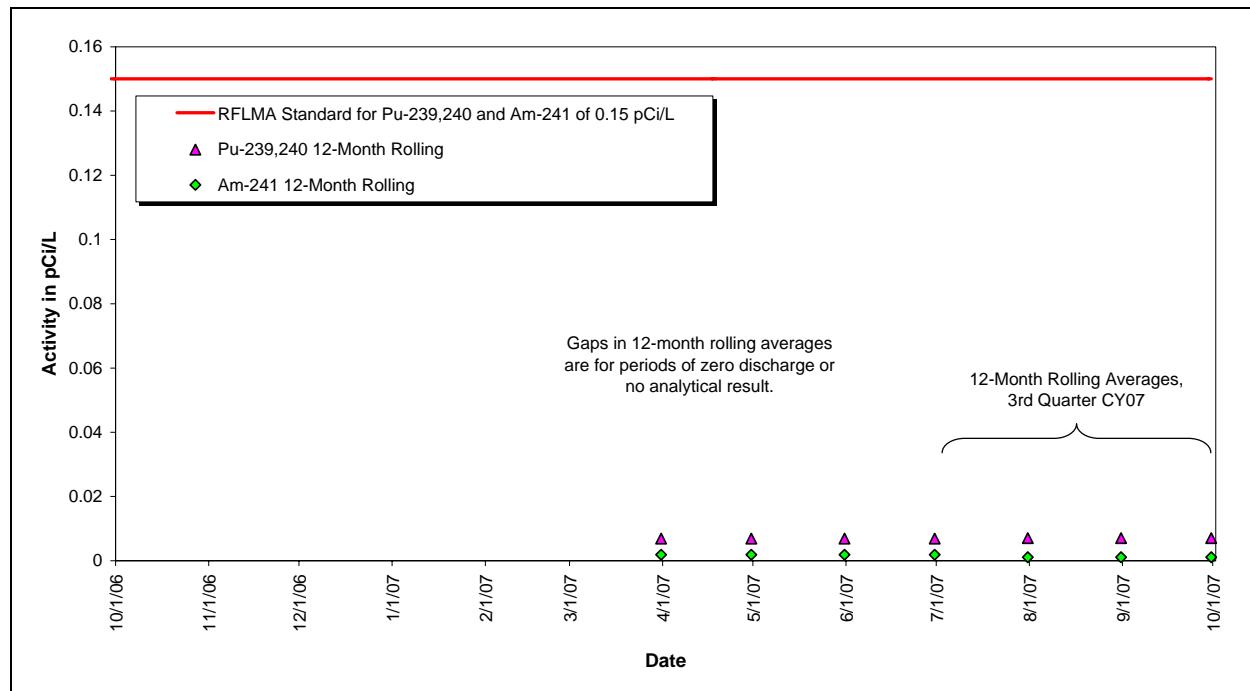
*Table 3–6. Annual Volume-Weighted Average Radionuclide Activities and Nitrate+Nitrite as N Concentrations at GS11 for 1997–2007*

Calendar Year	Volume-Weighted Average Activity (pCi/L)			Volume-Weighted Average Concentration (mg/L) <sup>a</sup>
	Am-241	Pu-239,240	Total U	
1997	0.005	0.008	1.82	NA
1998	0.011	0.004	2.18	NA
1999	0.003	0.007	1.76	NA
2000	0.001	0.018	2.45	NA
2001	0.003	0.002	2.89	NA
2002	0.003	0.000	2.29	NA
2003	0.003	0.002	2.91	NA
2004	0.006	0.002	2.71	NA
2005	0.022	0.002	1.78	NA (no pond discharge after 10/13/05)
2006	NA (no discharge)	NA (no discharge)	NA (no discharge)	NA (no discharge)
2007	0.001	0.007	3.77	3.02
Total (1997–2007)	0.006	0.006	2.26	3.02

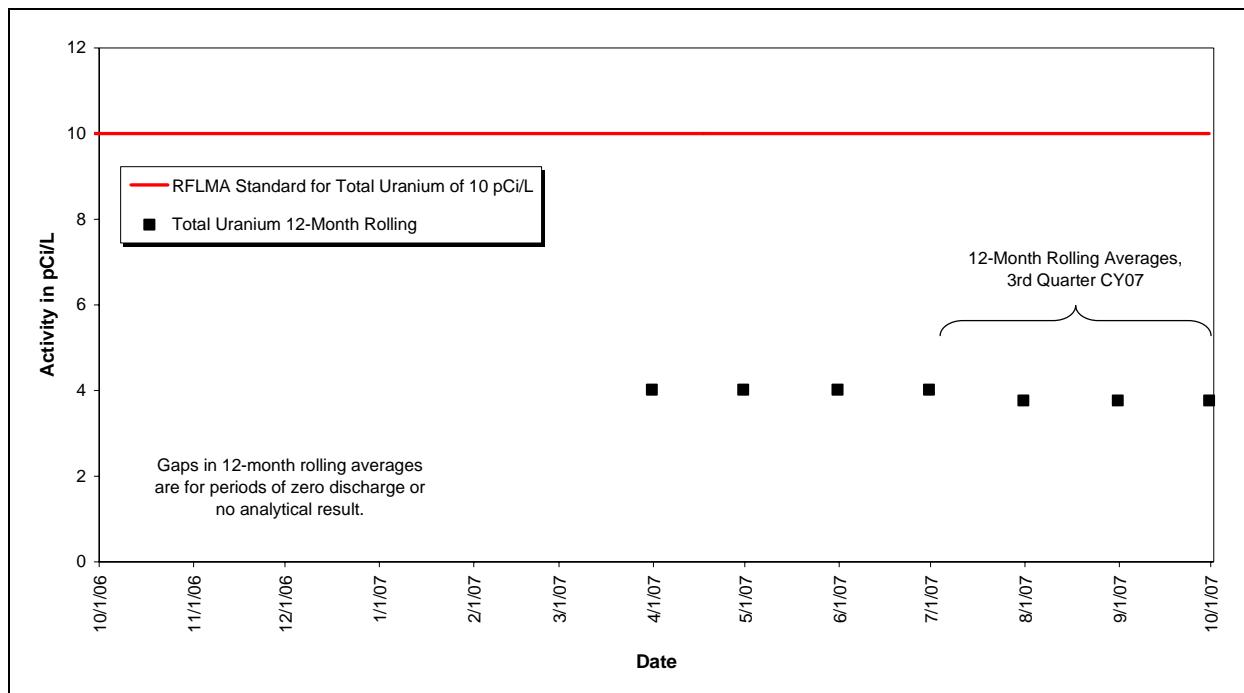
Notes: Data through September 30, 2007.

NA = not applicable.

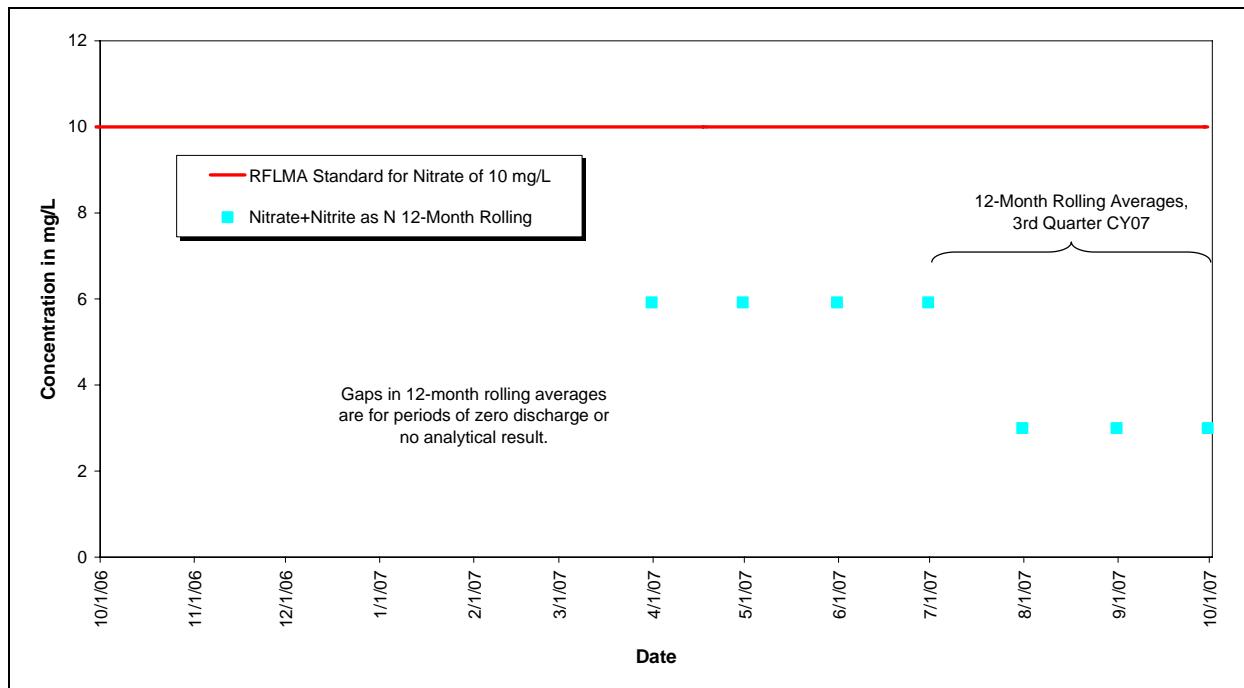
<sup>a</sup>Nitrate+nitrite as N sampling began on October 13, 2005.



*Figure 3–10. Volume-Weighted 12-Month Rolling Average Pu and Am Activities at GS11: Calendar Year Ending Third Quarter of CY 2007*



*Figure 3-11. Volume-Weighted 12-Month Rolling Average Total U Activities at GS11: Calendar Year Ending Third Quarter of CY 2007*



Note: Nitrate+nitrite as N 12-month averages are conservatively compared to the nitrate standard only.

*Figure 3-12. Volume-Weighted 12-Month Rolling Average Nitrate+Nitrite as N Concentrations at GS11: Calendar Year Ending Third Quarter of CY 2007*

### **3.1.3.5 Location GS31**

Monitoring location GS31 is located on Woman Creek at the outlet of Pond C-2 (Figure 3–1). The southern portion of the COU contributes flow to Pond C-2.

Pond C-2 has not been discharged during CY 2007. The last discharge occurred during July 1–July 14, 2005. Therefore, no 12-month rolling averages are calculated after June 30, 2006, and no compliance plots are presented.

Table 3–7 shows that all of the annual average Pu and Am activities were below 0.15 pCi/L. Additionally, the long-term Pu and Am averages (1997–2007) are below 0.15 pCi/L. The average U activities are all well below 11 pCi/L.

*Table 3–7. Annual Volume-Weighted Average Radionuclide Activities at GS31 for 1997–2007*

Calendar Year	Volume-Weighted Average Activity (pCi/L)		
	Am-241	Pu-239,240	Total U
1997	0.008	0.017	2.10
1998	0.018	0.003	2.53
1999	0.010	0.043	2.70
2000	No C-2 discharge	No C-2 discharge	No C-2 discharge
2001	0.013	0.021	1.25
2002	0.015	0.089	2.43
2003	0.006	0.015	1.62
2004	0.010	0.021	1.65
2005	0.008	0.020	4.07
2006	No C-2 discharge	No C-2 discharge	No C-2 discharge
2007	No C-2 discharge to date	No C-2 discharge to date	No C-2 discharge to date
Total (1997–2007)	0.011	0.019	2.13

Notes: There has been no Pond C-2 discharge during 2007 through September 30, 2007.

NA = not applicable.

### **3.1.4 POE Monitoring**

This objective deals with monitoring runoff and baseflow from the interior of the COU to the A-, B-, and C-Series Ponds to demonstrate compliance with surface water quality standards (see Table 1 of Attachment 2 to RFLMA). Water quality data are reportable under RFLMA when the applicable compliance parameter(s) are greater than the corresponding Table 1 value(s) (see Appendix D). Surface water is monitored by POEs SW093, GS10, and SW027 on North Walnut Creek, South Walnut Creek, and the South Interceptor Ditch (SID), respectively. These locations are shown on Figure 3–1. Sampling and data evaluation protocols are summarized in Table 3–8.

*Table 3–8. Sampling and Data Evaluation Protocols at POEs*

Location Code	Location Description	Sample Types/Frequencies	Analytes	Data Evaluation
GS10	South Walnut Creek at Outfall of FC-4	Continuous flow-paced composites; frequency varies (target is 20 per year) <sup>a</sup>	total hardness, Be, Cr, Pu, Am, and U isotopes <sup>b</sup> ; dissolved Ag and Cd; [TSS <sup>c</sup> ]	see Figure 6 in Appendix D
SW027	SID at Pond C-2	Continuous flow-paced composites; frequency varies (target is 20 per year) <sup>a</sup>	total hardness, Be, Cr, Pu, Am, and U isotopes <sup>b</sup> ; dissolved Ag and Cd; [TSS <sup>c</sup> ]	see Figure 6 in Appendix D
SW093	North Walnut Creek at Outfall of FC-3	Continuous flow-paced composites; frequency varies (target is 20 per year) <sup>a</sup>	total hardness, Be, Cr, Pu, Am, and U isotopes <sup>b</sup> ; dissolved Ag and Cd; [TSS <sup>c</sup> ]	see Figure 6 in Appendix D

Notes:

<sup>a</sup>Frequency depends on available flow.

<sup>b</sup>U isotopes are U-233,234 + U-235 + U-238.

<sup>c</sup>Total suspended solids (TSS) is analyzed when the composite sampling period is within TSS hold-time limits.

The following sections include summary tables and plots showing the applicable 30-day and 12-month rolling averages for the POE analytes. The evaluations include all results that were not rejected through the verification and validation process. Data are generally presented to decimal places as reported by the laboratories. Accuracy should not be inferred; minimum detectable concentrations/activities and analytical error are often greater than the precision presented. When a sample has a corresponding field duplicate, the value used in calculations is the arithmetic average of the ‘real’ and ‘duplicate’ values. When a sample has multiple ‘real’ analyses (Site-requested ‘reruns’), the value used in calculations is the arithmetic average of the multiple ‘real’ analyses.<sup>6</sup>

Refer to the analytical data accompanying this document for further information.

### 3.1.4.1 Location GS10

Monitoring location GS10 is located on South Walnut Creek just upstream of the B-Series Ponds (Figure 3–1). The central portion of the COU contributes flow to GS10 through Functional Channel (FC)-4 and FC-5.

Table 3–9 shows that many of the annual average Pu and Am activities at GS10 were greater than 0.15 pCi/L during active Site closure. However, a significant reduction in both Pu and Am activities has been observed following Site closure. With the completion of the FCs, implementation of enhanced erosion controls, revegetation, soil stabilization, and lack of substantial runoff, transport of Pu and Am has been virtually eliminated. Figure 3–13 shows no reportable Pu or Am values during the quarter.

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<sup>6</sup> Significant differences in values for a data pair are an indication of potential problems with sample preparation and/or analysis. Under these circumstances, an applicable value to be used for comparison cannot be determined with sufficient confidence to make compliance decisions. As such, an evaluation of the DER or RPD, depending on the analyte, is required to assess the representativeness of the sample and its usability for compliance decisions (see Section 8.2.3 of the RFSOG for discussion).

Table 3–9. Annual Volume-Weighted Average Radionuclide Activities at GS10 for 1997–2007

Calendar Year	Volume-Weighted Average Activity (pCi/L)		
	Am-241	Pu-239,240	Total U
1997	0.266	0.260	2.78
1998	0.109	0.158	3.06
1999	0.274	0.139	2.49
2000	0.421	0.195	2.23
2001	0.075	0.080	2.91
2002	0.087	0.061	2.88
2003	0.117	0.113	2.68
2004	0.136	0.314	2.48
2005	0.185	0.238	8.27
2006	0.010	0.014	13.43
2007	0.009	0.021	11.55
Total (1997–2007)	0.183	0.168	3.51

Notes: Data through October 1, 2007.

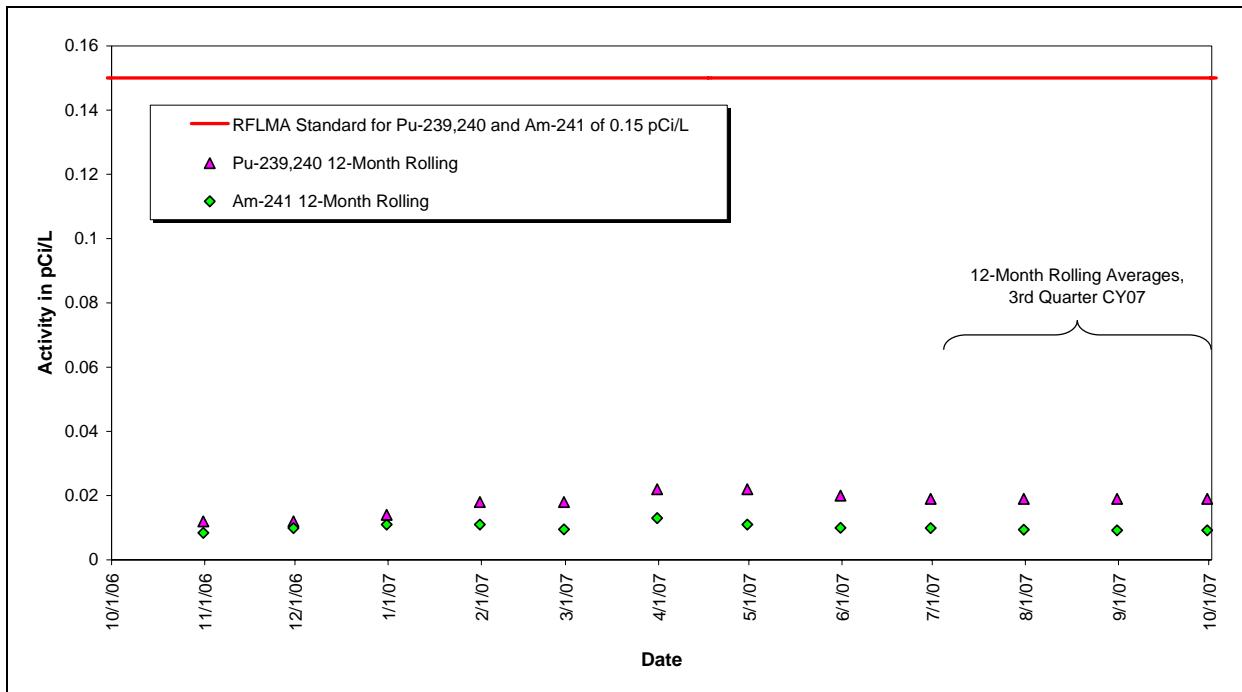


Figure 3–13. Volume-Weighted Average Pu and Am Compliance Values at GS10: Calendar Year Ending Third Quarter of CY 2007

Figure 3–14 shows reportable 12-month rolling averages for total U during the quarter. Details regarding notification and source evaluation are contained in Section 2.2.1.1, “Notification and Source Evaluation for Reportable 12-Month Rolling Total Uranium Values at RFCA Point of Evaluation GS10” of the *Quarterly Report of Site Surveillance and Maintenance Activities: Second Quarter Calendar Year 2006* (DOE 2006g). The Site continues to evaluate, in coordination with CDPHE, the measured U concentrations at GS10. Recent data are summarized below in a source evaluation update.

Table 3–10 shows that all of the annual average metals concentrations were less than the standard/PQL. Additionally, the long-term metals averages (1997–2007) were all less than the standard/PQL. Figure 3–15 shows that none of the 85th percentile 30-day average metals concentrations were reportable for the quarter.

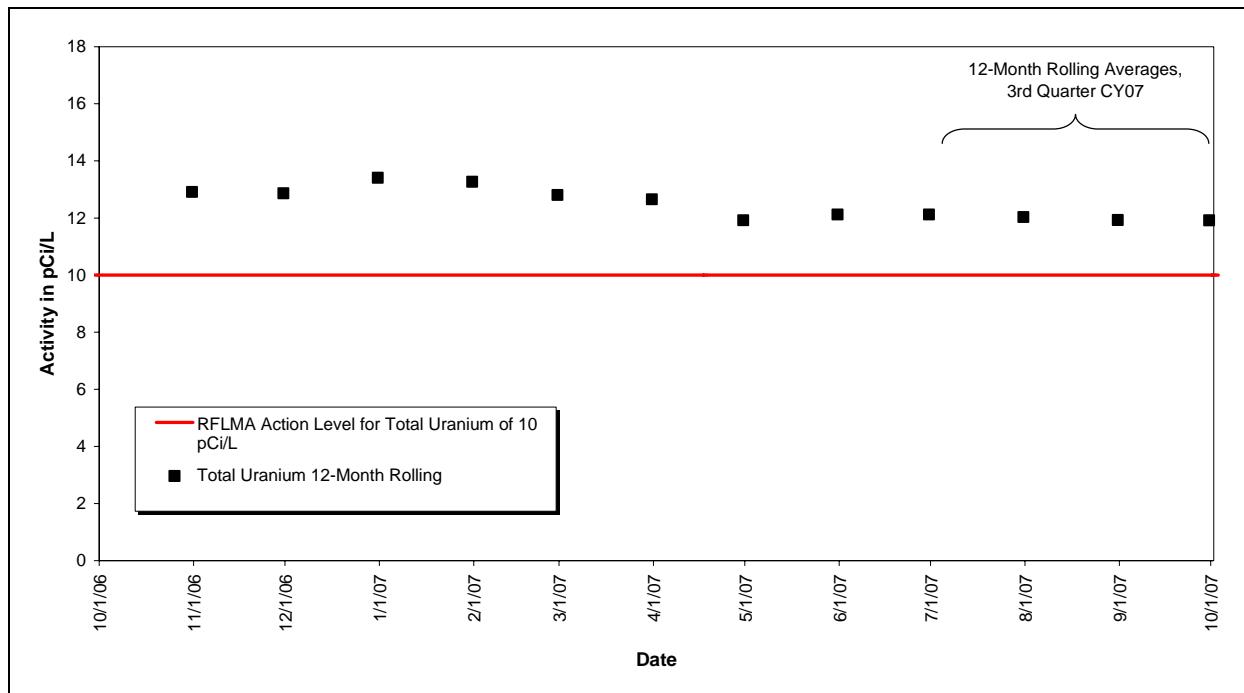
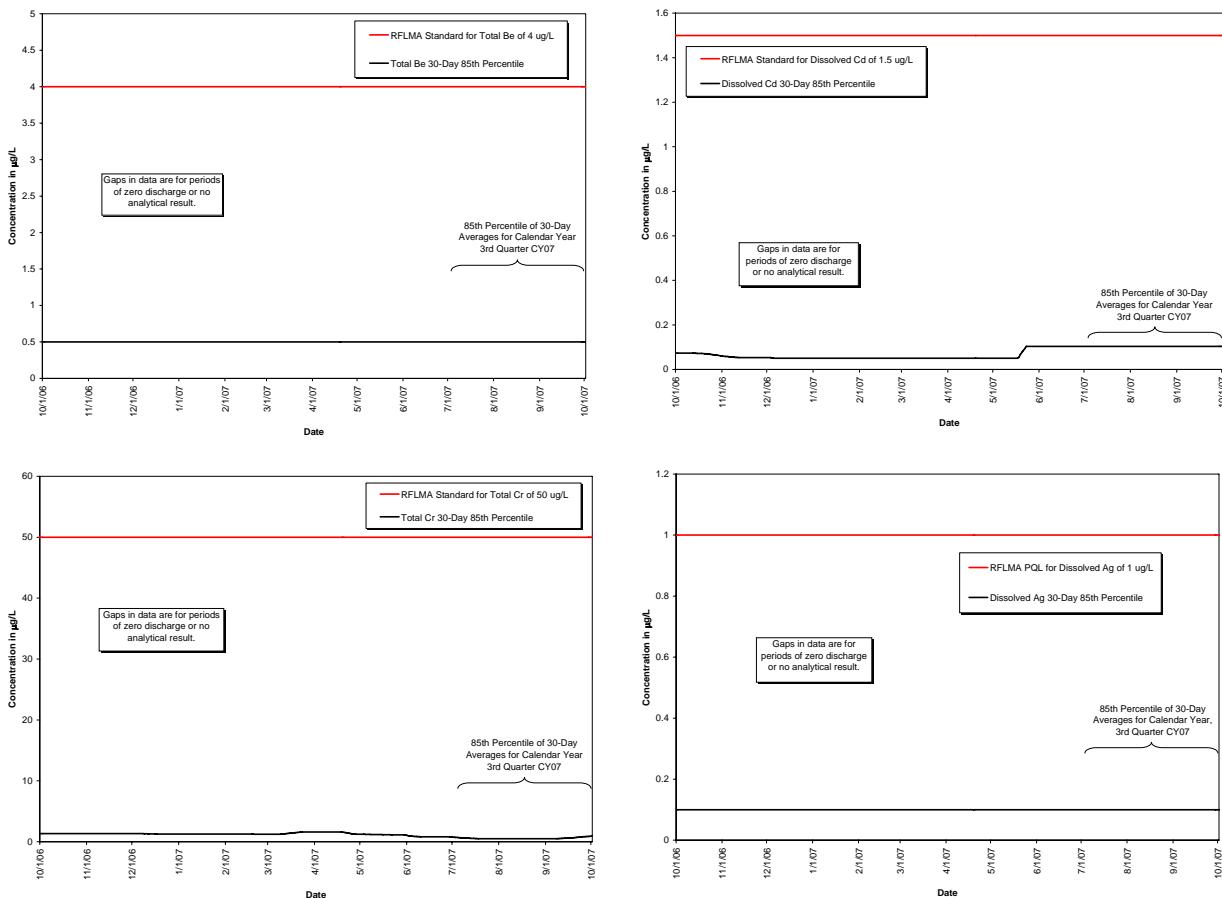


Figure 3–14. Volume-Weighted Average Total U Compliance Values at GS10: Calendar Year Ending Third Quarter of CY 2007

Table 3–10. Annual Volume-Weighted Average Hardness and Metals Concentrations at GS10 for 1997–2007

Calendar Year	Volume-Weighted Average Concentration ( $\mu\text{g}/\text{L}$ )				
	Hardness (mg/L)	Total Be	Dissolved Cd	Total Cr	Dissolved Ag
1997	138	0.50	0.09	4.05	0.11
1998	162	0.15	0.13	3.32	0.20
1999	139	0.16	0.07	4.08	0.15
2000	181	0.21	0.11	3.65	0.11
2001	222	0.32	0.11	5.95	0.11
2002	277	0.24	0.09	5.38	0.10
2003	228	0.22	0.10	6.91	0.12
2004	227	0.60	0.10	13.1	0.13
2005	401	0.88	0.06	17.5	0.15
2006	604	0.50	0.05	0.74	0.10
2007	374	0.50	0.10	0.89	0.10
Total (1997–2007)	213	0.35	0.10	6.15	0.13

Notes: Hardness units in mg/L. Data through October 1, 2007.



**Figure 3–15. Volume-Weighted Average Metals Compliance Values at GS10: Calendar Year Ending Third Quarter of CY 2007**

### **Summary of Recent Reportable 12-Month Rolling Total U Values at POE GS10**

This section provides follow-up information regarding the Site's July 13, 2006, notification of observed reportable concentrations of U in surface water at RFCA POE surface water monitoring location GS10, which is located in South Walnut Creek upstream of Pond B-1 in the Walnut Creek basin (Figure 3–1). Reportable U levels continue to be observed at GS10. The Site continues to evaluate, in coordination with CDPHE, the measured U concentrations at GS10.

DOE first became aware of the reportable 12-month rolling averages when all U sample results were validated on July 6, 2006. To meet the RFCA commitment at the time, DOE transmitted notification to EPA and CDPHE within the 15-day reporting period, which ended July 21, 2006. In addition, RFCA required that DOE, within 30 days of gaining knowledge of the reportable results, submit to EPA and CDPHE a source evaluation plan addressing reportable values. The July 13, 2006, notification letter served as both the comprehensive notice and the plan for that source evaluation, based on consideration for other evaluative work already performed in this drainage.

The characteristics of the current reportable period for U at GS10 are consistent with those for the previous reportable period during the summer of 2005. DOE provided notice for that reportable period on August 16, 2005 (05-DOE-00522).

The calculated 12-month rolling average for total U triggered the reporting requirements under RFCA Attachment 5, Section 2.4 (B) and subsequently Section 6.0 of Attachment 2 to RFLMA, for April 30, 2006, through September 30, 2007 (for details, see Table 3–11). All data used in the calculation of the 12-month rolling average have been validated. The end of the reportable period will be determined by subsequent data. Recent analytical results are listed in Table 3–12.

*Table 3–11. Reportable 12-Month Rolling Average Values for POE Monitoring Location GS10*

Analyte	Dates of Reportable Values	Range of 12-Month Rolling Average Values (pCi/L)
Total U	4/30/06-to be determined	10.19–13.41

Note: The standard for total U in Walnut Creek is 10 pCi/L.

*Table 3–12. Recent Analytical Results for Composite Samples Collected at GS10*

Composite Sample Start Date	Total U Analytical Result (pCi/L)
2/8/2007	13.82
3/2/2007	12.14
3/25/2007	17.31
4/17/2007	14.92
4/24/2007	8.46
4/25/2007	13.18
5/1/2007	15.12
5/10/2007	12.79
5/24/2007	12.83
5/31/2007	11.45
7/5/2007	6.88
7/23/2007	6.74
8/6/2007	6.56
8/21/2007	6.52
9/6/2007	6.15
10/1/2007	7.87
10/16/2007	10.98 <sup>a</sup>

Notes: <sup>a</sup>Result not validated; result is preliminary and subject to revision.

On July 31, DOE filed a Petition for Rulemaking with the Colorado Water Quality Control Commission (WQCC) to change the U surface water standard for the stream segments of Big Dry Creek on Rocky Flats. The Petition requests the Site-specific standard established in 1989, which was based on ambient levels when the plant was operating, be replaced with the Statewide Basic Standard adopted by the WQCC in 2005. The Statewide Basic Standard is based on the maximum contaminant level for drinking water. Rocky Flats staff met with local municipalities technical staff on August 8 to discuss the petition for rulemaking. Attendees were interested in sampling and analysis planned by the Rocky Flats staff to confirm that proportions of naturally

occurring to manmade U in water at Rocky Flats is consistent with pre-closure studies showing the U is predominantly naturally occurring.

The samples collected during this reporting period were sent to Los Alamos National Laboratory (LANL) in October 2007. The analysis results are presented and discussed in the LANL Report, *Thermal Ionization Mass Spectrometry Uranium Results for October 2007 RFETS Waters* (see Appendix E).

Rocky Flats staff intends to consult and develop consensus with the municipalities throughout the rulemaking process with the results of this consultation being subsequently presented to the WQCC. The WQCC has decided to accept the petition and set the matter for formal rulemaking, but set a hearing date for January 2009 instead of the date requested in the petition of January 2008.

The following evaluation for South Walnut Creek monitoring station GS10 covers data received through December 17, 2007. Laboratory analyses for the composite sample collected for the period November 1–November 20, 2007, have not been completed. The composite sample started on November 20, 2007, is still in progress. The following are included in this assessment:

- Evaluation of ongoing automated surface water monitoring at GS10;
- Estimation of U loads at GS10; and
- Evaluation of water-quality trends and correlations at GS10.

### ***Downstream Water Quality Monitoring***

Water flowing through GS10 also passes through the lower B-Series Ponds (Ponds B-4 and B-5) and South Walnut Creek before leaving the Site. POCs GS08 (Pond B-5 outlet) and GS03 (Walnut Creek at Indiana Street) again monitor this water during Pond B-5 discharges.

Pond B-5 was pre-discharge sampled on February 28, 2007. The total U concentration for that sample was 7.82 pCi/L. Pond B-5 was direct-discharged through the outlet to South Walnut Creek through POC GS08 starting on March 1, 2007, and ending on March 13, 2007. During the discharge period, six composite samples were collected at both POC GS08 and POC GS03. Total U concentrations in the GS08 samples ranged from 11.1 to 9.36 pCi/L. The 12-month rolling average at GS08 for March 31, 2007, was 9.99 pCi/L, just below the standard. Total U results at GS03 during the discharge ranged from 6.38 to 4.38 pCi/L; the highest 30-day average resulting from the discharge was 5.35 pCi/L.<sup>7</sup>

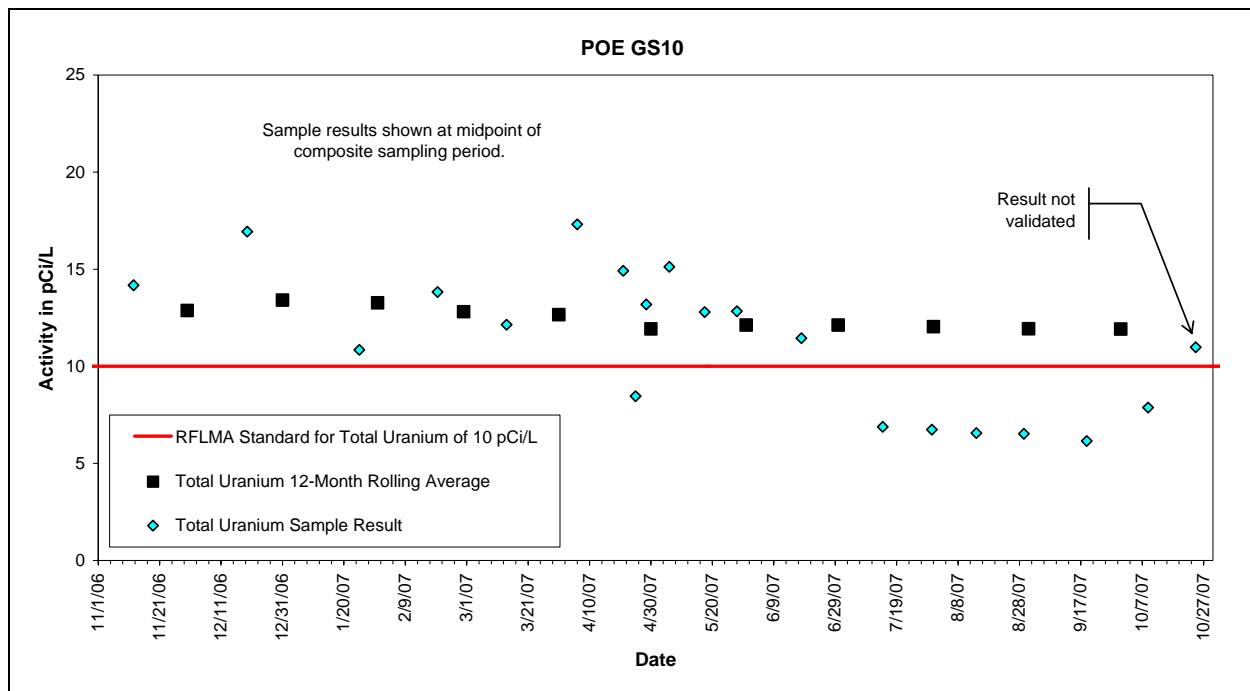
Pond B-5 was again pre-discharge sampled on May 4, 2007. Total U results for this sample (Site results) were significantly different than CDPHE results from the split sample. Based on the discrepancy, the decision was made to resample Pond B-5 for total U; samples were collected on June 7, 2007. The total U concentration for the June 7, 2007, sample was 7.8 micrograms per liter ( $\mu\text{g}/\text{L}$ ) (approximately 5.35 pCi/L). Based on that result, Pond B-5 was direct-discharged through the outlet to South Walnut Creek through POC GS08 starting on July 5, 2007, and ending on July 12, 2007. During the B-5 discharge period, two composite samples were collected at POC GS08 and three composite samples were collected at POC GS03. Total U concentrations

<sup>7</sup> Pond A-4 was concurrently discharged with Pond B-5 in March 2007; samples collected at GS03 included commingled water from both ponds.

in the GS08 samples were 4.29 and 4.87 pCi/L. The 12-month rolling average at GS08 for July 31, 2007, was 8.39 pCi/L. Total U results at GS03 during the B-5 discharge ranged from 3.47 to 3.99 pCi/L; the highest 30-day average at GS03 during the B-5 discharge was 2.17 pCi/L.<sup>8</sup>

### GS10 Monitoring Results

As specified in RFLMA, the Site demonstrates compliance using 12-month rolling average values for select radionuclides at POE surface water monitoring locations. Results for recent 12-month rolling average values using available data at GS10 are summarized in Table 3–11. Figure 3–16 shows the calculated compliance values and the individual sample results at GS10 for the previous CY period.

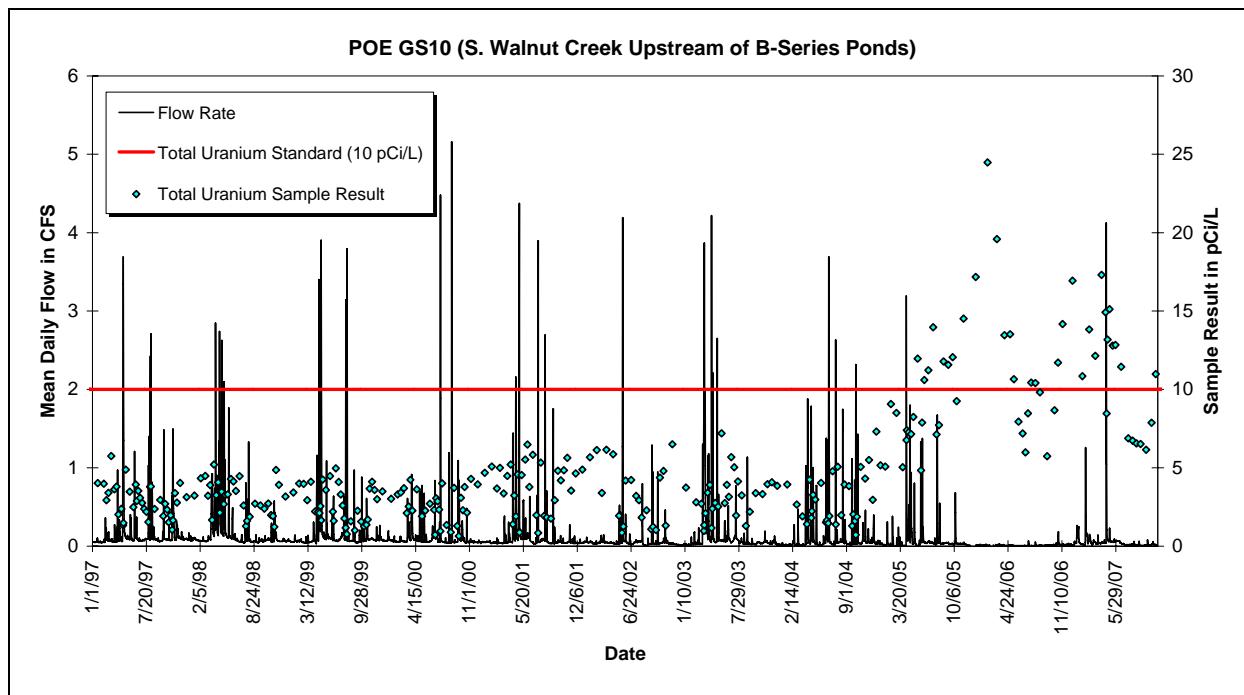


Note: Data through October 31, 2007.

Figure 3–16. POE Monitoring Station GS10: Compliance Values and Individual Sample Results for Total U (November 12, 2006–October 31, 2007)

All analytical results for the composite samples collected during the period of reportable values have been validated through October 15, 2007. A review of historical GS10 monitoring data shows that these results are measurably higher than those for previous years (Figure 3–17). The significant reduction in runoff following Site closure can also be clearly seen on Figure 3–17.

<sup>8</sup> Pond A-4 was also concurrently discharged with Pond B-5 in July 2007; samples collected at GS03 included commingled water from both ponds.



Note: Data through October 31, 2007. Total U standard on this plot is shown for reference only; only 12-month rolling averages are compared to the standard.

*Figure 3-17. POE Monitoring Station GS10: Hydrograph and Individual Sample Results for Total U (January 1, 1997–October 31, 2007)*

## Data Summary and Analysis

Monitoring data were extracted from the former Soil Water Database or the current SEEPro database. The following list describes the environmental data compilation process:

- Individual sample result values are calculated as arithmetic averages of real and field duplicate results when both results are from the same sampling event;<sup>9</sup>
- When available, Site-requested laboratory reruns are averaged with initial runs for the same sampling event;
- Laboratory duplicate and replicate quality control results are not used;
- When negative values for actinide measurement are returned from the laboratories due to blank correction, 0.0 pCi/L is used in the calculations;
- Only total radionuclide measurements are used; and
- Data that did not pass validation (rejected data) are not used.

## Verification and Validation of Surface Water Analytical Results

Prior to Site closure, all surface water isotopic data are either verified or validated, based on criteria determined by the Kaiser-Hill Analytical Services Division, or at the special request of

<sup>9</sup> Radionuclide data pairs are averaged when the DER is less than 1.5; sample pairs with DER ratios in excess of 1.5 are not used due to inferred lack of confidence in either result.

the requestor. Approximately 75 percent of all isotopic data are verified and the remaining 25 percent are validated. Validation is typically determined randomly for each subcontracted laboratory, based on the specific analytical suites. This random validation selection may or may not routinely include POE or POC locations. However, when reportable values are observed, all analytical results used in the calculations receive formal validation.

Under current LM procedures, all data are validated prior to being loaded into the SEEPro database.

#### ***High-Resolution Inductively Coupled Plasma/Mass Spectrometry and Thermal Ionization Mass Spectrometry Analyses***

Prior to Site closure, groundwater and surface water samples from select locations were sent to LANL for high-resolution inductively coupled plasma/mass spectrometry (HR ICP/MS) and/or thermal ionization mass spectrometry (TIMS) analyses. These analytical methods measure mass ratios of four U isotopes (masses 234, 235, 236, and 238). Isotopic ratios provide a signature that indicates whether and the extent to which the source of U is natural or anthropogenic (manmade).

In August 2005, South Walnut Creek surface water samples from SW056, SW141, and GS10, and groundwater samples from upgradient wells 91305, 99305, 91203, and 99405 were evaluated using HR ICP/MS and TIMS. The results indicate that, although concentrations of U vary widely, all the groundwater and surface water locations produce water samples with a predominantly natural U isotopic signature. Location GS10, however, displayed a higher percentage of anthropogenic U than the other locations. Concentrations of U in groundwater samples collected in August 2005 from wells located upstream of GS10 vary from less than 5 µg/L at well 91203 (with a 93.4 percent natural U isotopic signature) to nearly 400 µg/L at well 99405 (with an isotopic signature that is 99.9 percent natural U). (A previous sample from the original well at this location, 99401, contained just over 650 µg/L U that was 100 percent natural.)

The results of all the HR ICP/MS and TIMS analyses are summarized in a report titled *Quantitative Evaluation of Mixture Components in RFETS Uranium Isotopic Analyses: Development & Verification/Validation of Calculations using an Excel Spreadsheet* by Dr. David R. Janecky, LANL (Janecky 2006; included as Attachment 3 to Section 8 of the Remedial Investigation/Feasibility Study (RI/FS) Report published in June 2006). This report provides a summary of the HR ICP/MS and TIMS results and calculations of U isotopic mixtures (mixtures between natural and anthropogenic [enriched and depleted] U). Dr. Janecky's analysis concludes that the U at GS10 is dominated by natural U, with a lesser amount of depleted and minimal enriched U. An earlier sample analyzed by LANL, collected in May 2002, shows a generally similar isotopic signature, although the relative fraction of anthropogenic U is smaller as shown in Table 3–13.

*Table 3–13. U Concentrations and Isotopic Signatures from Samples Collected at GS10 as Reported by LANL*

Date	U Concentration, µg/L	% Depleted U	% Enriched U	% Natural U
5/1/2002	9.4	22.1	0.04	77.8
8/11/2005	13.2	36.2	0.10	63.7
7/23/2007 <sup>a</sup>	10.0	29.2	0.10	70.7

Source: Data are from RI/FS Section 8, Attachment 3, and the most recent LANL report (Appendix E); data have been normalized to 100 percent.

<sup>a</sup>This sample included a duplicate analysis; data shown are arithmetic averages.

The Site recently submitted additional samples to LANL for high-resolution isotopic analyses. High-resolution U analyses have been performed by LANL on samples from several locations (Table 3–14). Results from LANL analyses are summarized in the report titled *Thermal Ionization Mass Spectrometry Uranium Results for October 2007 RFETS Waters* (Janecky et al. 2007; see Appendix E); these data will be further evaluated in the 2007 Annual Report.

*Table 3–14. Locations Selected for Sampling and High-Resolution U Analysis*

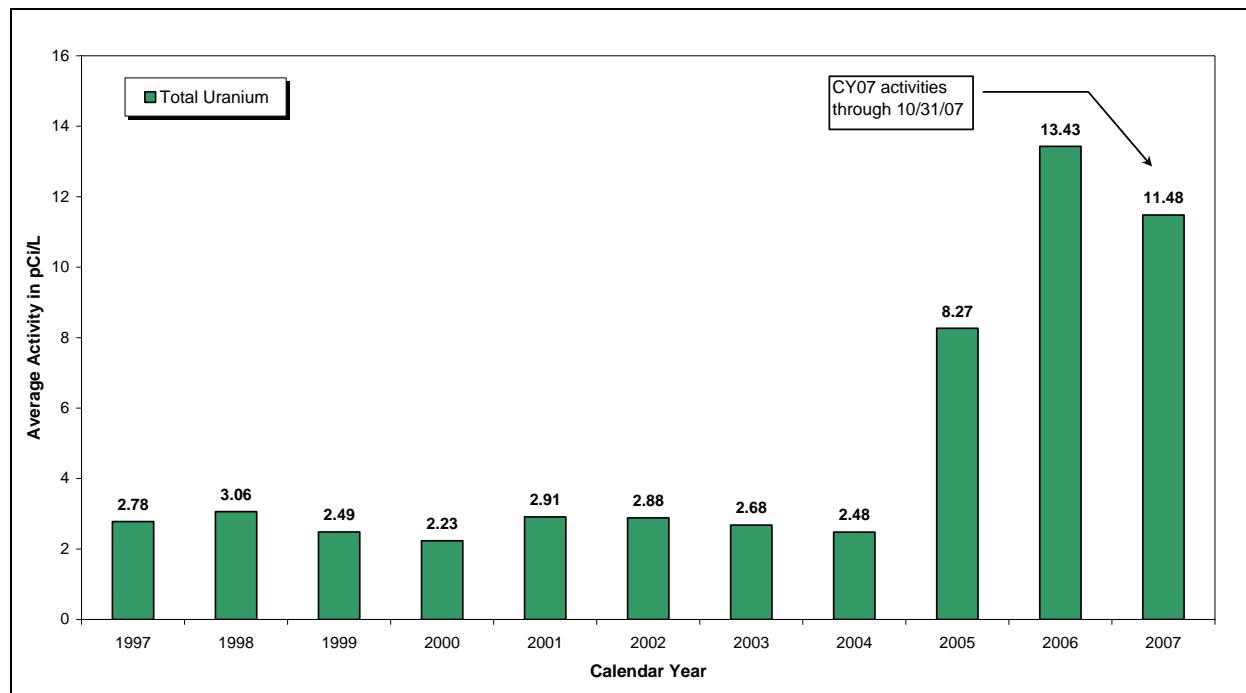
Sample Location	Sample Date - Time	General Area
Well 80205	9/7/2007 8:28	Downgradient OLF
Well 10594	9/11/2007 14:29	North Walnut Creek downgradient of SPP
Well 99405	9/12/2007 12:00	South Walnut Creek near former B991
GS03	7/9/2007 16:50	Walnut Creek at Indiana Street
SPP Discharge Gallery	9/12/2007 11:35	North Walnut Creek above Pond A-1
GS10	7/23/2007 12:00	South Walnut Creek

The samples from GS10 summarized in Table 3–13 illustrate the isotopic variability of the mixture of direct runoff and groundwater that contributes to surface water flow at this location. Over longer periods, this variability may have a greater influence on the characteristics of the U in surface water, both concentration and signature.

#### **Total U at GS10: Data Summary**

Figure 3–18 shows the volume-weighted average annual activity concentrations (concentration in surface water expressed as activity per unit volume) for total U at GS10 during CY 1997–2007. A measurable increase in concentration is noted starting in 2005.

Annual total U loads (mass) for GS10 in grams are plotted on Figure 3–19 to show long-term loading at GS10. For 1997–2007, the activity-concentration for each flow-paced composite sample is multiplied by the associated discharge volume to get picocuries (pCi), then converted to grams and totaled annually. Although reportable compliance values were observed during the 2005–2007 period, and concentrations in Figure 3–18 show a measurable increase, the loads for 2005–2007 are closer to historical ranges, and measurably lower in CY 2006. This further suggests that the recently observed increased U concentrations at GS10 may be a result of changing hydrologic conditions, and not significant increases in the quantity of U reaching the creek.



Note: Data through October 31, 2007.

Figure 3–18. Average Annual Total U Concentrations at GS10: 1997–2007

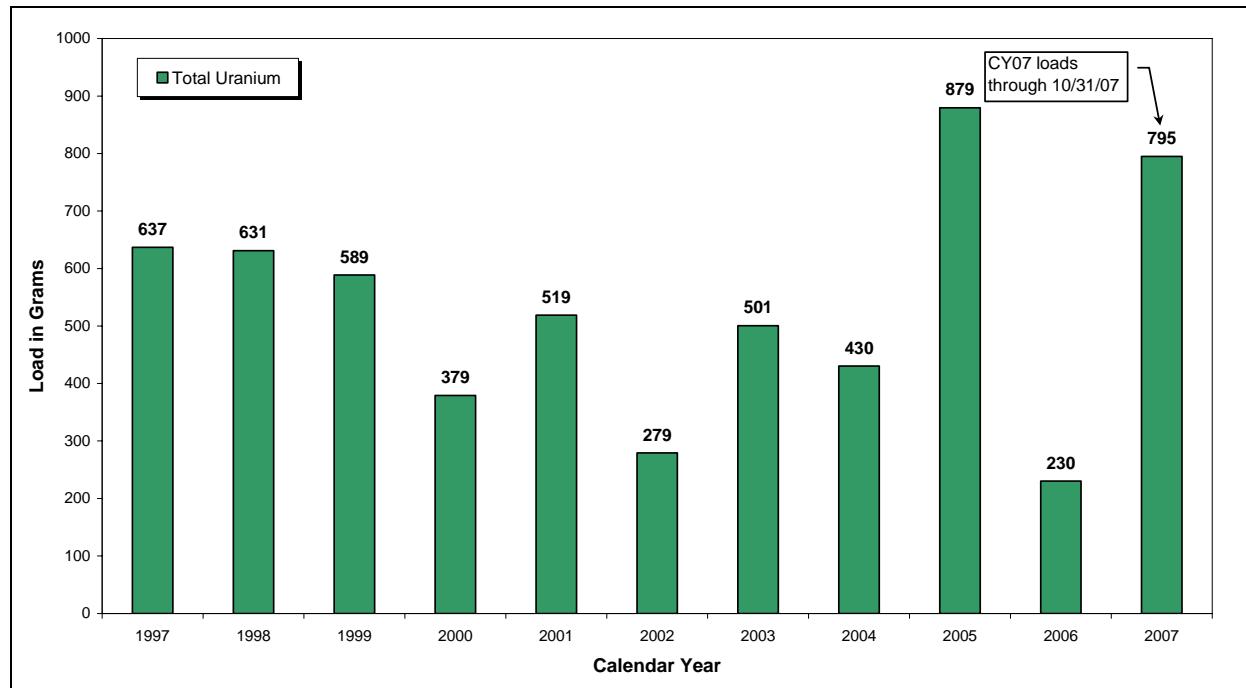
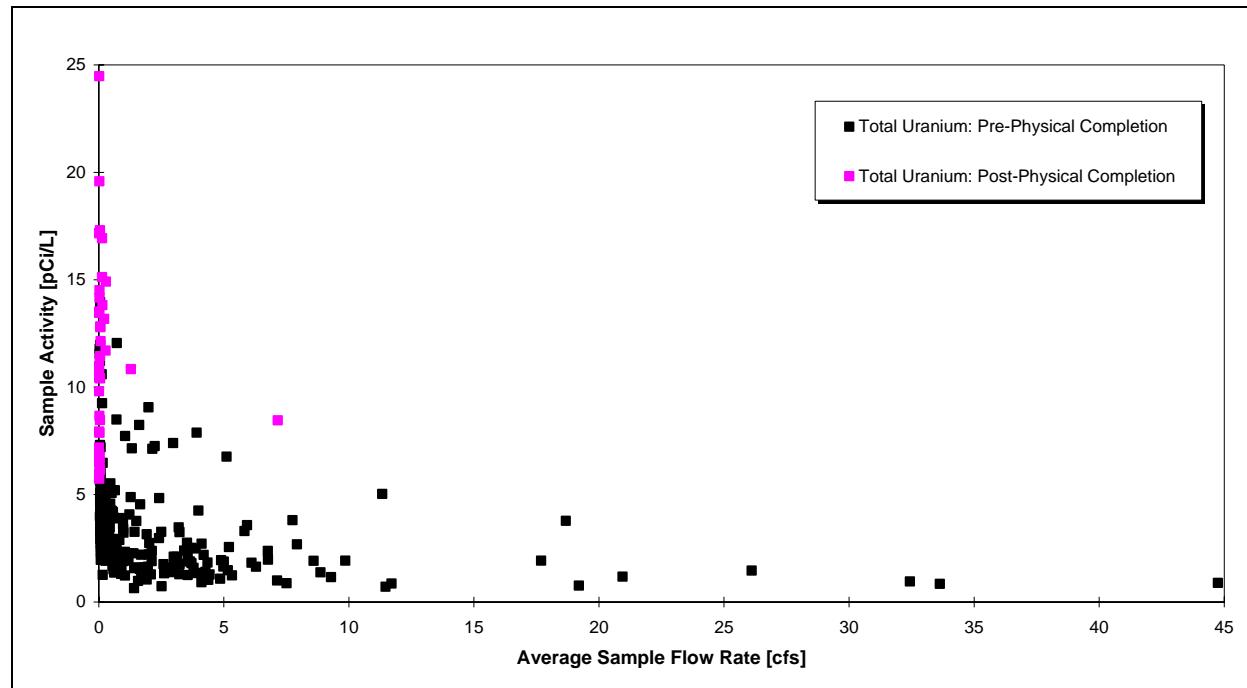


Figure 3–19. Annual Total U Loads at GS10: 1997–2007

Figure 3–20 shows that the higher U concentrations are generally associated with lower flow rates, during periods of extended baseflow sustained by groundwater contributions.<sup>10</sup> As the area of impervious surfaces in the GS10 drainage was reduced by Site closure (i.e., removal of buildings, asphalt, and concrete), direct runoff to GS10 was also reduced. Similarly, removal of Site infrastructure likely resulted in reduced baseflow contributions from domestic and sanitary water leakage.<sup>11</sup> Therefore, groundwater contributions to the creek over the same period comprised an increasing portion of the flows monitored at GS10. Groundwater data from monitoring wells located near South Walnut Creek show naturally occurring U in concentrations that are considerably higher than the surface water standard. Without the attenuation of U from groundwater sources by direct runoff and infrastructure leakage, increases in surface water U concentrations would be expected.



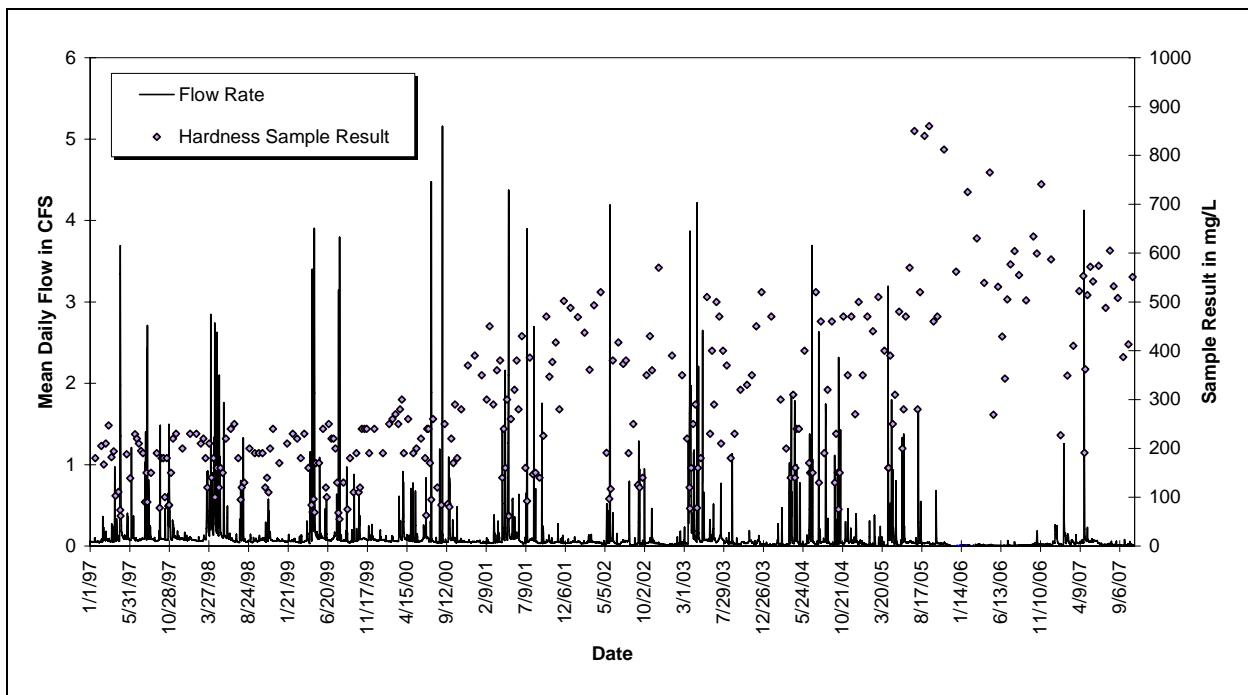
*Figure 3–20. Variation of Total U Concentration with Flow Rate at GS10: 1997–2007*

Hardness is collected for all composite samples at GS10 to support metals evaluation. Figure 3–21 shows individual sample results for hardness plotted with flow rate. A measurable increase in hardness is noted during the recent period of reduced flow rates and increased U concentrations (see Figure 3–17).<sup>12</sup> Since groundwater generally shows higher hardness than surface water runoff, these data further suggest an increase in the proportion of groundwater in flows at GS10.

<sup>10</sup> These groundwater contributions occur as localized or distributed seeps to the streambed.

<sup>11</sup> Leaks from domestic and sanitary utility lines are presumed to have lower U concentrations than natural groundwater sources.

<sup>12</sup> The measurably higher hardness concentrations starting in 2001 have been attributed to changes in the de-icing products used at Rocky Flats starting with the winter of 2000–2001.



*Figure 3-21. POE Monitoring Station GS10: Hydrograph and Individual Sample Results for Hardness (January 1, 1997–October 31, 2007)*

## Summary and Conclusions

Based on the above evaluation, Site personnel conclude that the recent U activities at GS10 are likely a result of changing hydrologic conditions (particularly the increasing groundwater component in surface water flows at GS10, relative to conditions that prevailed prior to Site closure), and that no specific remedial action(s) is indicated at this time. The data do not suggest a previously unknown localized source(s) of contamination that warrants targeted remediation. The current conclusions are summarized below:

- Data collected from all terminal pond and fenceline POCs remain below reporting thresholds for all monitored analytes. However, increased U concentrations are being observed downstream of GS10.
- Past HR ICP/MS and TIMS analyses for both groundwater and surface water samples collected upstream of GS10 all show a predominantly natural U signature (Janecky et al. 2006, 2007; see Appendix E for recent LANL data). While the four analyses<sup>13</sup> of surface water from GS10 indicate the existence of some anthropogenic U<sup>14</sup>, the normal variability of direct runoff and groundwater flow would be expected to strongly influence the U characteristics, both concentration and signature, over longer periods. To fully understand this variability, additional U data as they relate to the appropriate water-quality standard continue to be evaluated.
- Groundwater data within South Walnut Creek show naturally occurring U activities considerably higher than the surface water standard. Baseflow at GS10 is sustained by

<sup>13</sup> Three LANL samples have been collected at GS10: May 1, 2002, August 11, 2005, and July 23, 2007. The July 23, 2007, sample includes a duplicate analysis (see Appendix E).

<sup>14</sup> GS10 continues to show a predominantly natural uranium signature (see Appendix E).

groundwater expressions in the form of both localized seeps and distributed flow to the streambed.

- Surface water data from GS10 generally show that the higher U concentrations are associated with lower flow rates, during periods of extended baseflow sustained by groundwater contributions. As the amount of impervious surface at the Site was reduced, direct runoff to GS10 was also reduced. Similarly, removal of Site infrastructure likely resulted in reduced baseflow contributions from domestic and sanitary water leakage. Therefore, groundwater contributions to South Walnut Creek now make up a larger portion of the flows monitored at GS10. Without the attenuation of U groundwater sources by direct runoff and infrastructure leakage, increases in surface water U concentrations would be expected.

### **3.1.4.2 Location SW027**

Monitoring location SW027 is located at the end of the SID at the inlet to Pond C-2 (Figure 3–1). The southern portion of the COU contributes flow to SW027 through the SID.

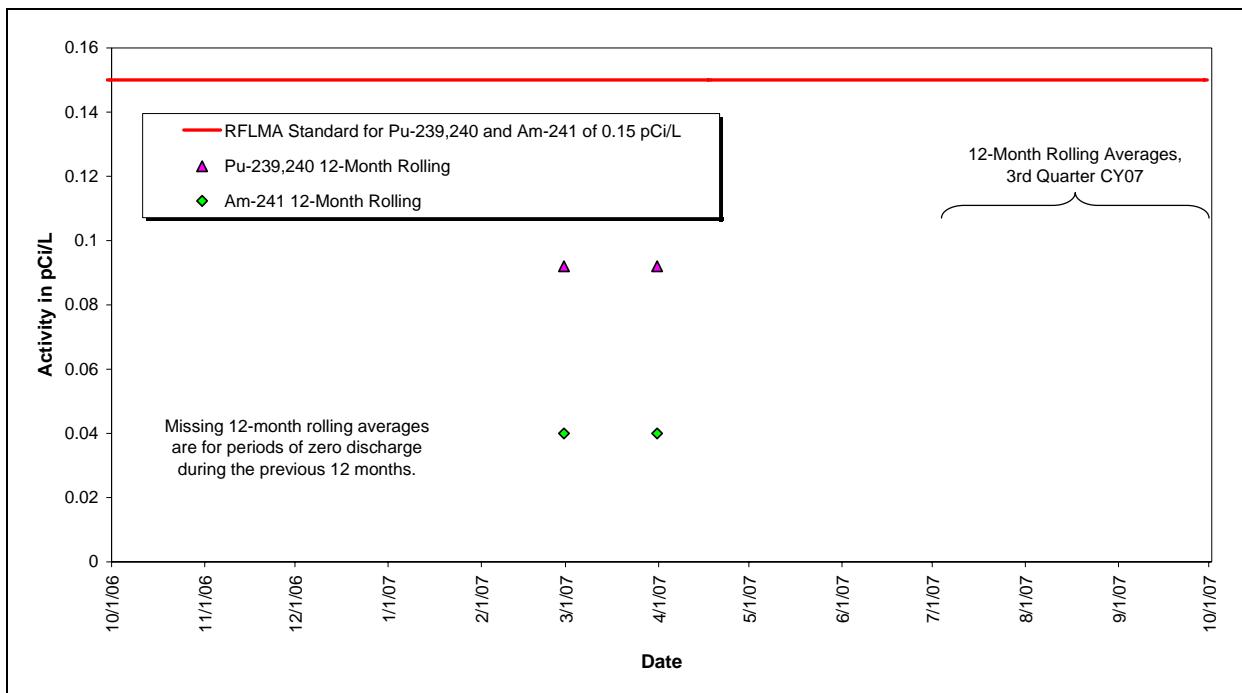
Table 3–15 shows that the majority of the annual average Pu and Am activities were less than 0.15 pCi/L. The significant increase in 2004 was the result of increased solids transport from disturbed areas associated with the 903 Pad/Lip accelerated actions. However, a significant reduction in both Pu and Am activities has been observed following completion of accelerated actions in the drainage. With the completion of the 903 Pad/Lip actions, implementation of enhanced erosion controls, revegetation, soil stabilization, and lack of substantial runoff, transport of Pu and Am approaching the action level has been virtually eliminated. The total U annual average activities are well below 11 pCi/L.

*Table 3–15. Annual Volume-Weighted Average Radionuclide Activities at SW027 for 1997–2006*

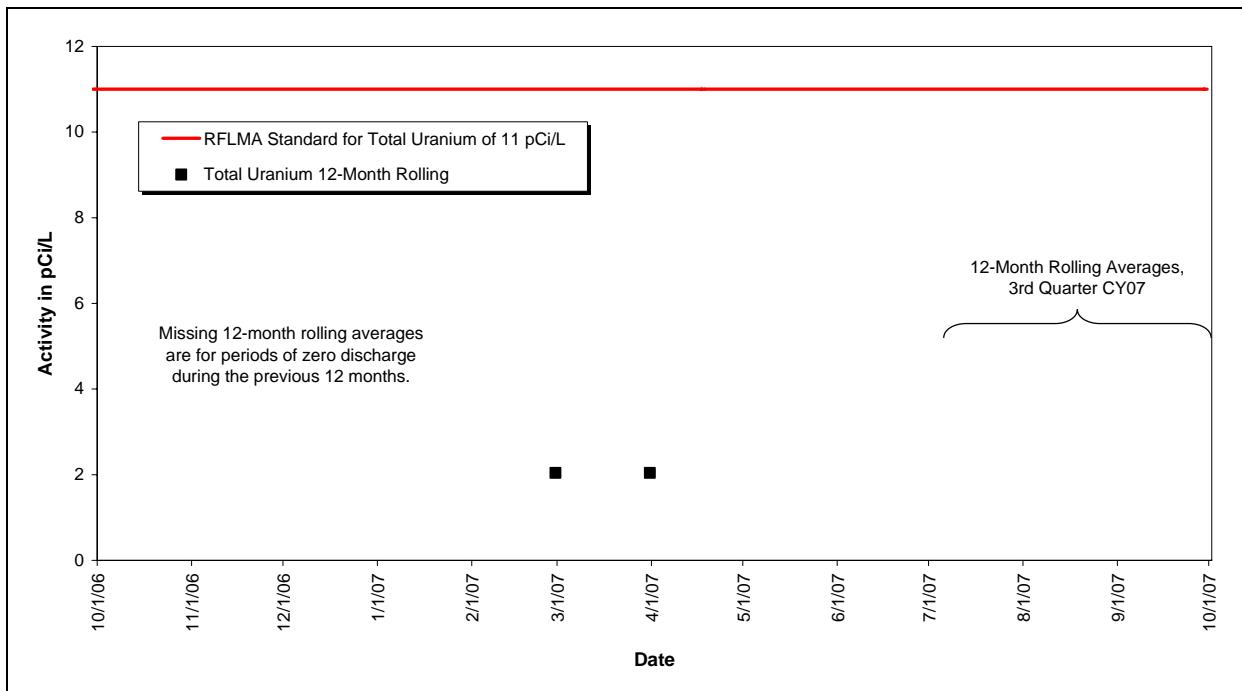
Calendar Year	Volume-Weighted Average Activity (pCi/L)		
	Am-241	Pu-239,240	Total U
1997	0.008	0.036	1.48
1998	0.021	0.156	3.45
1999	0.019	0.066	1.90
2000	0.060	0.348	1.10
2001	0.006	0.025	1.33
2002	0.001	0.003	0.53
2003	0.011	0.080	1.70
2004	0.413	2.273	1.05
2005	0.022	0.156	2.34
2006	NA (no flow)	NA (no flow)	NA (no flow)
2007	0.040	0.092	2.04
Total (1997–2007)	0.058	0.318	1.84

Notes: NA = not applicable. Data through April 25, 2007.

The composite sample started on April 26, 2007, was still in progress as of this report (see Appendix B). As such, no 12-month rolling averages are calculated for the third quarter of CY 2007 (Figure 3–22 and Figure 3–23).



*Figure 3–22. Volume-Weighted Average Pu and Am Compliance Values at SW027: Calendar Year Ending Third Quarter of CY 2007*



*Figure 3–23. Volume-Weighted Average Total U Compliance Values at SW027: Calendar Year Ending Third Quarter of CY 2007*

Table 3–16 shows that all of the annual average metals concentrations were less than the standard. Additionally, the long-term metals averages (1997–2007) were less than the standards.

The composite sample started on April 26, 2007, was still in progress as of this report. As such, no 85th percentile 30-day average metals concentrations are calculated after April 25, 2007 (Figure 3–24).

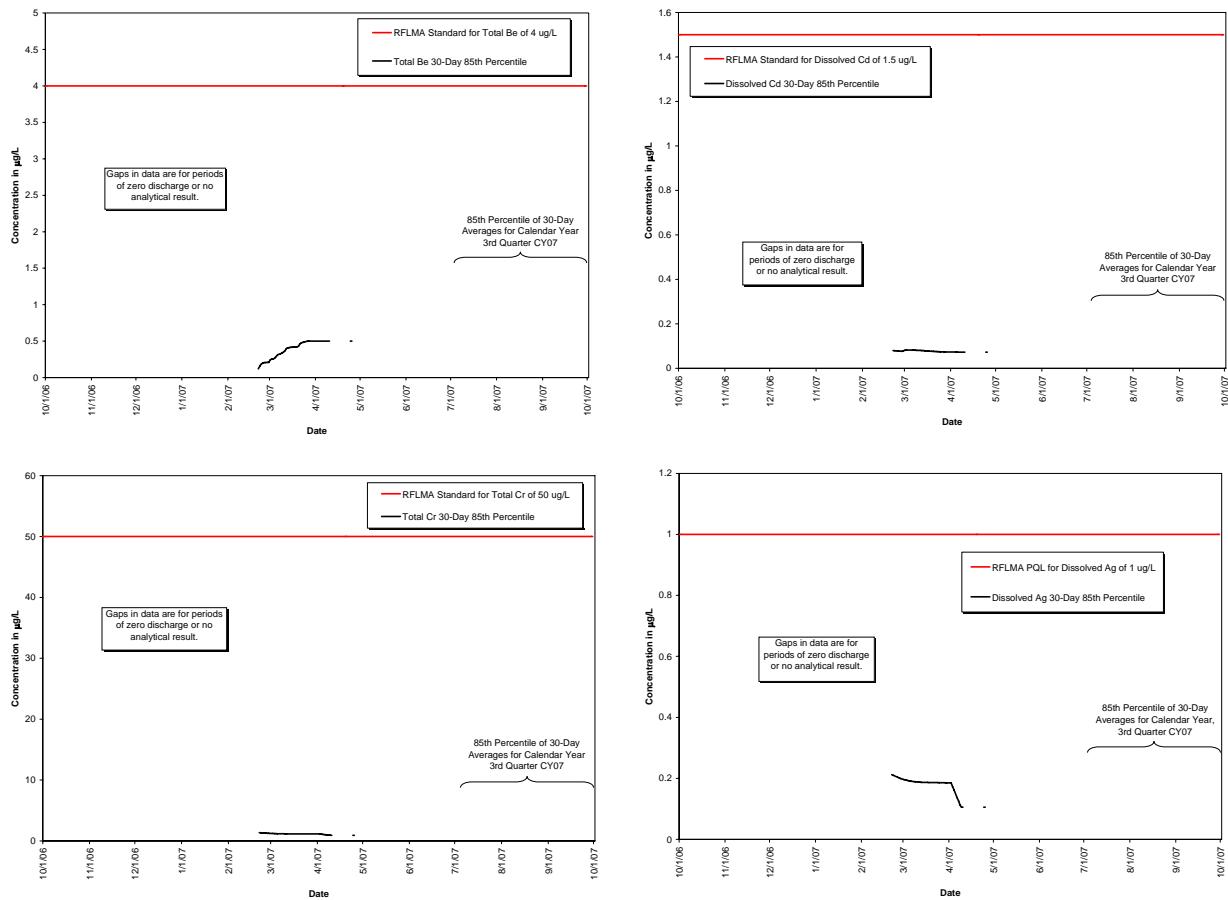
*Table 3–16. Annual Volume-Weighted Average Hardness and Metals Concentrations at SW027  
for 1997–2007*

Calendar Year	Volume-Weighted Average Concentration (µg/L)				
	Hardness (mg/L)	Total Be	Dissolved Cd	Total Cr	Dissolved Ag
1997	112	0.44	0.09	1.71	0.10
1998	152	0.14	0.15	0.91	0.21
1999	111	0.03	0.10	1.55	0.24
2000	150	0.27	0.05	4.14	0.09
2001	145	0.23	0.07	1.82	0.12
2002	114	0.12	0.05	2.88	0.11
2003	148	0.06	0.06	1.75	0.15
2004	133	0.32	0.06	7.36	0.19
2005	236	0.08	0.07	2.03	0.19
2006	NA (no flow)	NA (no flow)	NA (no flow)	NA (no flow)	NA (no flow)
2007	133	0.50	0.05	0.50	0.10
Total (1997–2007)	138	0.21	0.08	2.28	0.16

Note: Hardness units in mg/L.

NA = not applicable

Data through April 25, 2007.



**Figure 3-24. Volume-Weighted Average Metals Compliance Values at SW027: Calendar Year Ending Third Quarter of CY 2007**

### 3.1.4.3 Location SW093

Monitoring location SW093 is located on North Walnut Creek 1,300 feet upstream of the A-Series Ponds (Figure 3-1). The northern portion of the COU contributes flow to SW093 through FC-2 and FC-3.

Table 3-17 shows that the majority of the annual average Pu and Am activities were below 0.15 pCi/L. Additionally, the long-term Pu and Am averages (1997–2007) are below 0.15 pCi/L. The average total U activities are all well below 10 pCi/L.

Table 3-17 shows an increase in Pu and Am activities during 2004. However, a significant reduction in both Pu and Am activities has been observed following Site closure. With the completion of the FCs, implementation of enhanced erosion controls, revegetation, soil stabilization, and lack of substantial runoff, transport of Pu and Am has been virtually eliminated. Figure 3-25 and Figure 3-26 show no reportable Pu, Am, or total U values during the quarter.

Table 3–17. Annual Volume-Weighted Average Radionuclide Activities at SW093 for 1997–2007

Calendar Year	Volume-Weighted Average Activity (pCi/L)		
	Am-241	Pu-239,240	Total U
1997	0.035	0.052	2.38
1998	0.020	0.022	2.26
1999	0.025	0.038	1.95
2000	0.022	0.040	2.06
2001	0.011	0.015	2.14
2002	0.017	0.006	2.67
2003	0.039	0.056	2.34
2004	0.622	0.603	2.50
2005	0.029	0.022	3.97
2006	0.004	0.008	5.93
2007	0.009	0.011	3.64
Total (1997–2007)	0.078	0.084	2.49

Note: Data through October 1, 2007.

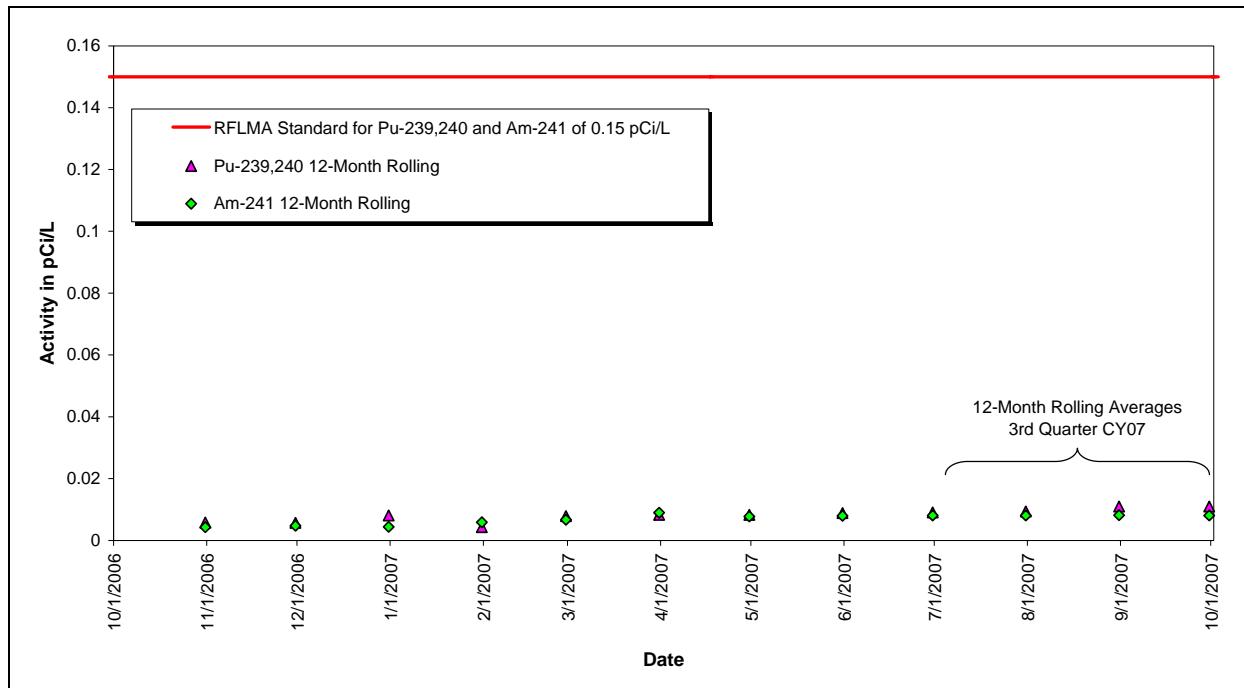


Figure 3–25. Volume-Weighted Average Pu and Am Compliance Values at SW093: Calendar Year Ending Third Quarter of CY 2007

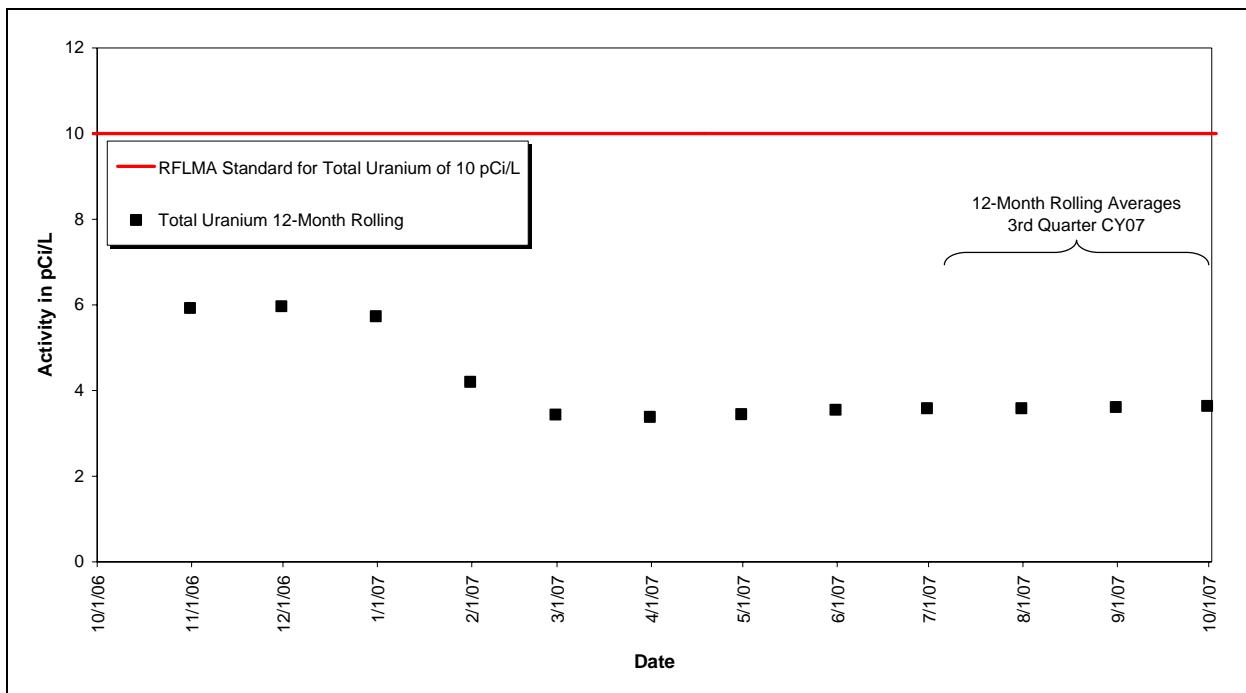


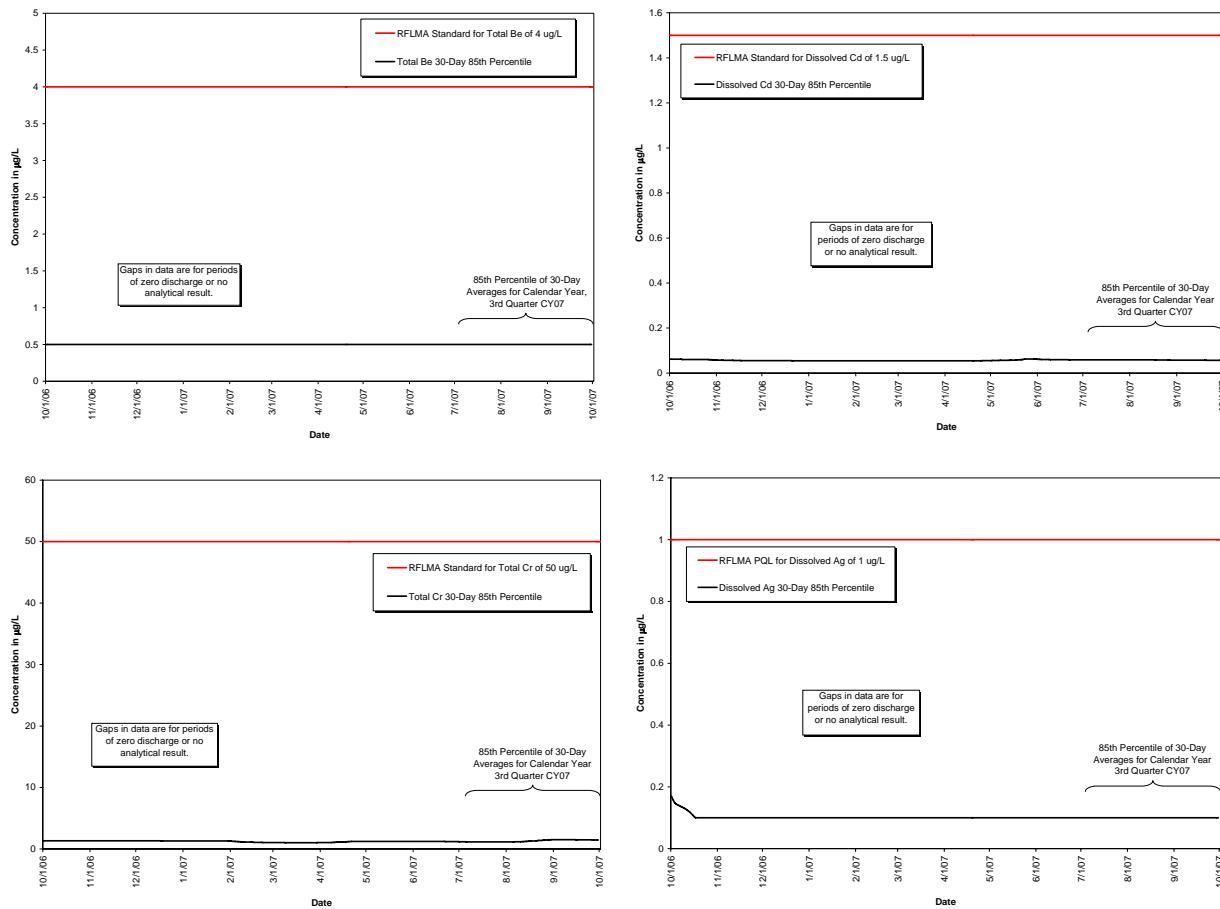
Figure 3–26. Volume-Weighted Average Total U Compliance Values at SW093: Calendar Year Ending Third Quarter of CY 2007

Table 3–18 shows that all of the annual average metals concentrations were less than the action level. Additionally, the long-term metals averages (1997–2006) were less than the action levels. Figure 3–27 shows that none of the 85th percentile 30-day average metals concentrations were reportable for the quarter.

Table 3–18. Annual Volume-Weighted Average Hardness and Metals Concentrations at SW093 for 1997–2007

Calendar Year	Volume-Weighted Average Concentration (µg/L)				
	Hardness (mg/L)	Total Be	Dissolved Cd	Total Cr	Dissolved Ag
1997	168	0.43	0.07	2.36	0.12
1998	184	0.14	0.23	2.22	0.22
1999	152	0.20	0.13	5.08	0.16
2000	231	0.21	0.08	3.94	0.11
2001	247	0.36	0.07	6.49	0.11
2002	365	0.30	0.08	5.95	0.11
2003	257	0.29	0.09	6.88	0.16
2004	315	0.57	0.09	12.05	0.12
2005	337	0.11	0.05	1.92	0.11
2006	564	0.50	0.05	0.82	0.10
2007	274	0.50	0.06	0.81	0.10
Total (1997–2007)	239	0.31	0.10	4.80	0.14

Note: Hardness units in mg/L. Data through October 1, 2007.



*Figure 3–27. Volume-Weighted Average Metals Compliance Values at SW093: Calendar Year Ending Third Quarter of CY 2007*

### 3.1.5 Area of Concern Wells and SW018

AOC wells (Figure 3–1 and Table 3–19) are located to evaluate potential groundwater impacts to surface water. Impacts will be based on a minimum of two routinely scheduled sampling events in a row, not on a single data point. Analytical results from AOC wells are compared directly against the appropriate surface water standards in Table 1 of Attachment 2 to RFLMA or the U threshold. Analytical data from surface water performance location SW018, where grab samples for volatile organic compounds (VOCs) are collected to support groundwater objectives, are assessed in a manner similar to data from AOC wells.

*Table 3–19. Sampling and Data Evaluation Protocols at AOC Wells and SW018*

<b>Location Code</b>	<b>Location Description</b>	<b>Sample Types/Frequencies</b>	<b>Analytes<sup>a</sup></b>	<b>Data Evaluation</b>
00193	Woman Creek upstream of Pond C-2	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U	see Figure 7 in Appendix D
00997	South Walnut Creek upstream of Pond B-5	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate	see Figure 7 in Appendix D
10304	Southeast of 903 Pad/Ryan's Pit Plume at Woman Creek	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate	see Figure 7 in Appendix D
10594	North Walnut Creek downstream of Pond A-1	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate	see Figure 7 in Appendix D
11104	Downgradient, downstream	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U	see Figure 7 in Appendix D
4087	Below Landfill Pond	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate	see Figure 7 in Appendix D
42505	Terminus of FC-2	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 7 in Appendix D
89104	Downgradient at Woman Creek	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 7 in Appendix D
B206989	Below Landfill Pond	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate	see Figure 7 in Appendix D
SW018	FC-2 west of former Building 771 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 7 in Appendix D

Notes: <sup>a</sup>Samples for the analysis of U will be field-filtered using a 0.45 micron in-line filter.  
Nitrate is analyzed as nitrate+nitrite as N; this result is conservatively compared to the nitrate standard only.

### **3.1.5.1 Data Evaluation**

Neither AOC wells nor SW018 were scheduled for routine monitoring in the third quarter of 2007. AOC well 10594 was sampled for specialized U analysis; see Appendix E for additional information.

### **3.1.6 Boundary Wells**

Boundary wells (Figure 3–1 and Table 3–20) are located at the Walnut Creek/Indiana Street and Woman Creek/Indiana Street intersections to provide surrounding stakeholders with assurance that groundwater leaving the historic extent of RFETS in these drainages is not adversely impacted by the Site.

Boundary wells are not required by the CAD/ROD, nor have they supported the technical groundwater monitoring requirements defined by the preceding IMPs. However, these wells are included in the network to satisfy operational monitoring requirements in RFLMA.

*Table 3–20. Sampling and Data Evaluation Protocols at Boundary Wells*

<b>Location Code</b>	<b>Location Description</b>	<b>Sample Types/Frequencies</b>	<b>Analytes<sup>a</sup></b>	<b>Data Evaluation</b>
10394	Woman Creek at Indiana Street	Annual grabs; Second calendar quarter (high-water conditions)	VOCs, U, nitrate	see Figure 7 in Appendix D
41691	Walnut Creek at Indiana Street	Annual grabs; Second calendar quarter (high-water conditions)	VOCs, U, nitrate	see Figure 7 in Appendix D

Notes: <sup>a</sup>Samples for the analysis of U will be field-filtered using a 0.45 micron in-line filter.

Nitrate is analyzed as nitrate+nitrite as N; this result is conservatively compared to the nitrate standard only.

### **3.1.6.1 Data Evaluation**

No Boundary wells were scheduled for monitoring in the third quarter of 2007.

### **3.1.7 Sentinel Wells**

Sentinel wells (Figure 3–1 and Table 3–21) are located near downgradient edges of contaminant plumes, in drainages, at groundwater treatment systems, and along contaminant pathways to surface water. These wells are monitored to determine whether concentrations of contaminants are increasing, thereby providing advance warning of potential groundwater quality impacts to the downgradient AOC well(s). Confirmation of a potential impact to downgradient wells will require an analytical record that consistently indicates an impact, not a single data point that indicates a contaminant has been detected.

Sentinel wells are used to monitor the performance of an accelerated action (including soil/source removals, in situ contaminant plume treatment, groundwater intercept components of treatment systems, and facility demolitions) and assess contaminant trends at important locations. Data from Sentinel wells are supplemented by those from Evaluation wells, and are used to determine when monitoring may cease or additional remedial work should be considered.

*Table 3–21. Sampling and Data Evaluation Protocols at Sentinel Wells*

<b>Location Code</b>	<b>Location Description</b>	<b>Sample Types/Frequencies</b>	<b>Analytes<sup>a</sup></b>	<b>Data Evaluation</b>
00797	South of former Building 881 (B881) area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U	see Figure 8 in Appendix D
04091	East of source area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 8 in Appendix D
11502	Southeast of former B444 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U	see Figure 8 in Appendix D
15699	Downgradient of MSPTS intercept trench	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 8 in Appendix D
20205	North/northeast of former B771/774 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, Pu, Am	see Figure 8 in Appendix D
20505	North of former B771/774 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, Pu, Am	see Figure 8 in Appendix D

*Table 3-21 (continued). Sampling and Data Evaluation Protocols at Sentinel Wells*

<b>Location Code</b>	<b>Location Description</b>	<b>Sample Types/Frequencies</b>	<b>Analytes<sup>a</sup></b>	<b>Data Evaluation</b>
20705	North/northwest of former B771 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate, Pu, Am	see Figure 8 in Appendix D
23296	Downdgradient of ETPTS intercept trench	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U	see Figure 8 in Appendix D
30002	Downdgradient at North Walnut Creek	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 8 in Appendix D
33703	Downdgradient of source area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 8 in Appendix D
37405	North/northeast part of former B371/374 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate, Pu, Am	see Figure 8 in Appendix D
37505	North part of former B371 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate	see Figure 8 in Appendix D
37705	East/southeast of former B371/374 area at foundation drain confluence	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate, Pu, Am	see Figure 8 in Appendix D
40305	East part of former B444 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U	see Figure 8 in Appendix D
45605	Adjacent to remnants of SW056 French drain and drain interruption	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 8 in Appendix D
52505	West of former IHSS 118.1 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 8 in Appendix D
70099	Northwest (side-gradient) of SPPTS intercept trench	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	U, nitrate	see Figure 8 in Appendix D
88104	South part of former B881 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U	see Figure 8 in Appendix D
90299	Southeast part of 903 Pad/Ryan's Pit Plume at SID	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 8 in Appendix D
90399	Southeast part of 903 Pad/Ryan's Pit Plume at SID	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 8 in Appendix D
91203	Downdgradient of Oil Burn Pit #2 source area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 8 in Appendix D
91305	South of confluence of FC-4 and FC-5	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate	see Figure 8 in Appendix D
95099	Downdgradient of ETPTS intercept trench	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 8 in Appendix D
95199	Downdgradient of ETPTS intercept trench	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 8 in Appendix D
95299	Downdgradient of ETPTS intercept trench	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 8 in Appendix D

*Table 3-21 (continued). Sampling and Data Evaluation Protocols at Sentinel Wells*

<b>Location Code</b>	<b>Location Description</b>	<b>Sample Types/Frequencies</b>	<b>Analytes<sup>a</sup></b>	<b>Data Evaluation</b>
99305	East part of former B991 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate	see Figure 8 in Appendix D
99405	Southeast part of former B991 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate	see Figure 8 in Appendix D
P210089	Downgradient (north) portion of SPP	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate	see Figure 8 in Appendix D
TH046992	Downgradient of ETPTS intercept trench	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 8 in Appendix D

Notes: <sup>a</sup>Samples for the analysis of U will be field-filtered using a 0.45 micron in-line filter.

Nitrate is analyzed as nitrate+nitrite as N; this result is conservatively compared to the nitrate standard only.

### **3.1.7.1 Data Evaluation**

Only Sentinel well P210089 was monitored in the third quarter of 2007 for routine analyses (refer to Appendix A for analytical results). This well was monitored because samples collected during the second quarter of 2007 were not complete: samples for VOC analyses were inadvertently omitted. Additional samples were collected to support an evaluation of sampling procedures. Sentinel well 99405 was sampled for specialized U analyses; see Appendix E for additional information.

Analytical data are generally consistent with previous results. These data and statistical results will be discussed in greater detail in the 2007 Annual Report.

### **3.1.8 Evaluation Wells**

Evaluation wells (Figure 3-1 and Table 3-22) are located within groundwater contaminant plumes and near plume source areas, and within the interior of the COU at the Site. As such, they may monitor the effects of accelerated actions that have been performed (e.g., source removal and in situ treatment). Data from these Evaluation wells are therefore appropriate to determine whether monitoring of a particular plume and source area may cease, and provide data to support the determination of whether corresponding groundwater plume treatment systems may be decommissioned. In addition, Evaluation wells are used to support any groundwater evaluations that may be needed as a result of changing contaminant characteristics in downgradient Sentinel and/or AOC wells. Data from these wells also assist evaluations of predictions made through groundwater modeling efforts.

*Table 3–22. Sampling and Data Evaluation Protocols at Evaluation Wells*

<b>Location Code</b>	<b>Location Description</b>	<b>Sample Types/Frequencies</b>	<b>Analytes<sup>a</sup></b>	<b>Data Evaluation</b>
00191	East of former 903 Pad area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	see Figure 9 in Appendix D
00203	Downgradient (south) portion of SPP	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U	see Figure 9 in Appendix D
00491	Southeast of former 903 Pad area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	see Figure 9 in Appendix D
00897	Mound Site source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	see Figure 9 in Appendix D
3687	East Trenches source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	see Figure 9 in Appendix D
03991	East of East Trenches source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	see Figure 9 in Appendix D
05691	East Trenches source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	see Figure 9 in Appendix D
07391	Ryan's Pit source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	see Figure 9 in Appendix D
18199	North of former IHSS 118.1 source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	see Figure 9 in Appendix D
20902	Northwest of former IHSS 118.1 source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	see Figure 9 in Appendix D
21505	West of former B776/777 area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	see Figure 9 in Appendix D
22205	Downgradient (north) portion of SPP	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U	see Figure 9 in Appendix D
22996	East/northeast part of former B886 area	Biennial grabs; Second calendar quarter (high-water conditions)	U, nitrate	see Figure 9 in Appendix D
30900	PU&D Yard Plume source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U, nitrate	see Figure 9 in Appendix D
33502	Oil Burn Pit #1 source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U, nitrate	see Figure 9 in Appendix D
33604	Oil Burn Pit #1 source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U, nitrate	see Figure 9 in Appendix D
33905	North of former 231 Tanks area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	see Figure 9 in Appendix D
40005	West part of former B444 area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	see Figure 9 in Appendix D
40205	South part of former B444 end	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U	see Figure 9 in Appendix D

Table 3-22 (continued). Sampling and Data Evaluation Protocols at Evaluation Wells

<b>Location Code</b>	<b>Location Description</b>	<b>Sample Types/Frequencies</b>	<b>Analytes<sup>a</sup></b>	<b>Data Evaluation</b>
50299	East of former 903 Pad area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	see Figure 9 in Appendix D
51605	Downgradient, adjacent to GS13	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U	see Figure 9 in Appendix D
55905	North part of former B559 area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	see Figure 9 in Appendix D
56305	West part of former B559 area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	see Figure 9 in Appendix D
70705	East part of former B707 area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	see Figure 9 in Appendix D
79102	SPP source area - north	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U, nitrate	see Figure 9 in Appendix D
79202	SPP source area - north	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U, nitrate	see Figure 9 in Appendix D
79302	SPP source area - northeast	Biennial grabs; Second calendar quarter (high-water conditions)	U, nitrate	see Figure 9 in Appendix D
79402	SPP source area - northeast	Biennial grabs; Second calendar quarter (high-water conditions)	U, nitrate	see Figure 9 in Appendix D
79502	SPP source area - east	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U, nitrate	see Figure 9 in Appendix D
79605	SPP source area - east	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	see Figure 9 in Appendix D
88205	South part of former B881 area	Biennial grabs; Second calendar quarter (high-water conditions)	U, nitrate	see Figure 9 in Appendix D
891WEL	OU1 Plume source area	Biennial grabs; Second calendar quarter (high-water conditions)	U, nitrate	see Figure 9 in Appendix D
90402	Southeast of former 903 Pad area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U	see Figure 9 in Appendix D
90804	Southeast part of 903 Pad/Ryan's Pit Plume	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	see Figure 9 in Appendix D
91105	Oil Burn Pit #2 source area	Biennial grabs; Second calendar quarter (high-water conditions)	U, nitrate	see Figure 9 in Appendix D
B210489	Downgradient of SPPTS	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U	see Figure 9 in Appendix D
P210189	SEP-area VOC plume source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U, nitrate	see Figure 9 in Appendix D
P208989	SPP source area - north	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U, nitrate	see Figure 9 in Appendix D
P114689	Southwest of former B559 area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U	see Figure 9 in Appendix D

*Table 3-22 (continued). Sampling and Data Evaluation Protocols at Evaluation Wells*

<b>Location Code</b>	<b>Location Description</b>	<b>Sample Types/Frequencies</b>	<b>Analytes<sup>a</sup></b>	<b>Data Evaluation</b>
P115589	West part of former B551 Warehouse area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U	see Figure 9 in Appendix D
P419689	Southeast of former B444 area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	see Figure 9 in Appendix D
P416889	Southeast of former B444 area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	see Figure 9 in Appendix D

Notes: <sup>a</sup>Samples for the analysis of U will be field-filtered using a 0.45 micron in-line filter.

Nitrate is analyzed as nitrate+nitrite as N; this result is conservatively compared to the nitrate standard only.

### **3.1.8.1 Data Evaluation**

Evaluation wells were not scheduled for routine monitoring in the third quarter of 2007.

### **3.1.9 Investigative Monitoring**

When reportable water-quality measurements are detected by surface water monitoring at POEs or POCs, additional monitoring may be required to identify<sup>15</sup> the source and evaluate for mitigating action. Although not required by RFLMA, this investigative monitoring objective is intended to provide upstream water-quality information if reportable water-quality values are detected at POEs or POCs. Data collection is generally limited to POE and POC analytes and is intended to be discontinued once acceptable water quality has been demonstrated at POEs and POCs for an extended period.

Data collection is currently implemented at the locations listed in Table 3–23 and shown on Figure 3–1. The majority of these locations are sampled primarily to satisfy other monitoring objectives, although the data are used for this investigative objective. The current locations were not chosen in response to a specific source evaluation. They were chosen preemptively as a best management practice (BMP) immediately following completion of the Rocky Flats Site Plant/RFETS Closure Project and are intended to be discontinued under this monitoring objective based on data evaluation. Any future data collection upstream of POEs and POCs, subject to the consultative process, is not limited to the locations in Table 3–23. The parties may also elect to collect data using other methods, subject to the characteristics of the reportable water-quality values and through the consultative process.

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<sup>15</sup> Note that the term “identify” is used here to mean “locate.” Characterization is also implied.

*Table 3–23. Sampling and Data Evaluation Protocols at Investigative Monitoring Locations*

Location Code	Location Description	Sample Types/Frequencies	Analytes	Data Evaluation
GS05	Woman Creek at western POU boundary	Continuous flow-paced composites; frequency varies (target is 8 per year) <sup>a</sup>	total U isotopes <sup>b</sup>	see Figure 6-15 in Appendix D
GS13	North Walnut Creek just upstream of A-Series Bypass	Continuous flow-paced composites; frequency varies (target is 8 per year) <sup>a</sup>	total U isotopes <sup>b</sup>	see Figure 6-15 in Appendix D
GS51	Drainage area tributary to the SID and south of former 903 Pad/Lip	Continuous flow-paced composites; frequency varies (target is 8 per year) <sup>a</sup>	total Pu and Am; [TSS <sup>c</sup> ]	see Figure 6-15 in Appendix D
GS59	Woman Creek 800 feet east of OLF	Continuous flow-paced composites; frequency varies (target is 8 per year) <sup>a</sup>	total U isotopes <sup>b</sup>	see Figure 6-15 in Appendix D
SW018	FC-2 west of former Building 771 area	Continuous flow-paced composites; frequency varies (target is 8 per year) <sup>a</sup>	total Pu and Am; [TSS <sup>c</sup> ]	see Figure 6-15 in Appendix D

Notes:

<sup>a</sup>Frequency depends on available flow.

<sup>b</sup>U isotopes are U-233,234 + U-235 + U-238.

<sup>c</sup>Total suspended solids (TSS) is analyzed when the composite sampling period is within TSS hold-time limits.

### **3.1.9.1 Data Evaluation**

During the third quarter of CY 2007, five investigative locations were operational (Table 3–23). No routine data evaluation for the investigative objective is presented in this quarterly report. Refer to the analytical data accompanying this document for additional information.

### **3.1.10 Present Landfill Monitoring**

This objective deals with monitoring surface water and groundwater at the PLF to determine the short- and long-term effectiveness of the remedy. These requirements were initially identified in the *Final Interim Measures/Interim Remedial Action for IHSS 114 and RCRA Closure of the RFETS Present Landfill*, Appendix B: Post-Accelerated Action Monitoring and Long-Term Surveillance and Monitoring Considerations (DOE 2004), and finalized in the PLF M&M Plan (DOE 2006b).

Water monitoring locations for the PLF are shown on Figure 3–1. The surface water and treatment system monitoring requirements deal specifically with the PLFTS and are discussed in detail under the PLFTS heading in Section 3.1.12, “Groundwater Treatment System Monitoring.” Details regarding general groundwater monitoring are provided below.

Monitoring wells supporting the PLF are classified as RCRA wells. Three of these wells are located upgradient of the landfill, and three are downgradient of the landfill but upgradient of the Landfill Pond. This network and the monitoring requirements are specified in the PLF M&M Plan. Prior to late 2005 when this network was finalized, a different set of monitoring wells comprised the RCRA network for the PLF. As a result of this change, data from the new network cannot be compared accurately against data from the older network. Additional monitoring wells are present in the general vicinity of the PLF; however, they do not contribute to the RCRA monitoring of the facility and, therefore, are addressed elsewhere.

Sampling and data evaluation protocols for the RCRA wells at the PLF are provided in Table 3–24.

*Table 3–24. Sampling and Data Evaluation Protocols at PLF RCRA Monitoring Wells*

Location Code	Location Description	Sample Types/Frequencies	Analytes <sup>a</sup>	Data Evaluation
70193	Upgradient (northwest) of the upgradient end of the PLF	Quarterly each calendar quarter	VOCs, metals	see Figure 10 in Appendix D
70393	Upgradient (west/southwest) of the upgradient end of the PLF	Quarterly each calendar quarter	VOCs, metals	see Figure 10 in Appendix D
70693	Upgradient (southwest) of the upgradient end of the PLF	Quarterly each calendar quarter	VOCs, metals	see Figure 10 in Appendix D
73005	Downgradient (northeast) of the downgradient end of the PLF	Quarterly each calendar quarter	VOCs, metals	see Figure 10 in Appendix D
73105	Downgradient (east) of the downgradient end of the PLF at the PLFTS	Quarterly each calendar quarter	VOCs, metals	see Figure 10 in Appendix D
73205	Downgradient (southeast) of the downgradient end of the PLF	Quarterly each calendar quarter	VOCs, metals	see Figure 10 in Appendix D

Notes: <sup>a</sup>Samples for the analysis of metals will be field-filtered using a 0.45 micron in-line filter.

Laboratory analytes are limited to those based on the analytical methods listed in the PLF M&M Plan.

### **3.1.10.1 Data Evaluation**

Results from monitoring the RCRA wells at the PLF (Appendix A) will be discussed and statistically evaluated as part of the 2007 Annual Report.

### **3.1.11 Original Landfill Monitoring**

This objective deals with monitoring surface water and groundwater at the OLF to determine the short- and long-term effectiveness of the remedy. These requirements were initially identified in the *Draft Final IM/IRA of IHSS Group SW-2, IHSS 115, Original Landfill and IHSS 196, Filter Backwash Pond*, Appendix B: Post-Accelerated Action Monitoring and Long-Term Surveillance and Monitoring Considerations (DOE 2005a), and finalized in the OLF M&M Plan (DOE 2006a).

Water monitoring locations for the OLF are shown on Figure 3–1. Sampling and data evaluation protocols are summarized in Table 3–25 and Table 3–26.

*Table 3–25. Sampling and Data Evaluation Protocols at OLF Surface Water Monitoring Locations*

Location Code	Location Description	Sample Types/ Frequencies	Analytes <sup>b</sup>	Data Evaluation
GS05; upgradient	Woman Creek at west POU fenceline	Quarterly grab samples <sup>a</sup>	total U isotopes <sup>c</sup> ; dissolved and total metals; VOCs; Hg	see Figure 12 in Appendix D
GS59; downgradient	Woman Creek 800 feet downstream of OLF	Quarterly grab samples <sup>a</sup>	total U isotopes <sup>c</sup> ; dissolved and total metals; VOCs; Hg	see Figure 12 in Appendix D

Notes: <sup>a</sup>Samples for isotopic U and metals are currently collected as continuous flow-paced composites in conjunction with the Investigative monitoring objective; decisions specifically for the OLF monitoring objective only require quarterly grabs.

<sup>b</sup>Laboratory analytes are limited to those based on the analytical methods listed in the OLF M&M Plan.

<sup>c</sup>U isotopes are U-233,234 + U-235 + U-238.

*Table 3–26. Sampling and Data Evaluation Protocols at OLF RCRA Monitoring Wells*

Location Code	Location Description	Sample Types/ Frequencies	Analytes <sup>a</sup>	Data Evaluation
P416589	Upgradient (north) of the OLF	Quarterly each calendar quarter	VOCs, SVOCs, metals	see Figure 10 in Appendix D
80005	Downgradient (south) of the western portion of the OLF	Quarterly each calendar quarter	VOCs, SVOCs, metals	see Figure 10 in Appendix D
80105	Downgradient (south) of the central portion of the OLF	Quarterly each calendar quarter	VOCs, SVOCs, metals	see Figure 10 in Appendix D
80205	Downgradient (south) of the eastern portion of the OLF	Quarterly each calendar quarter	VOCs, SVOCs, metals	see Figure 10 in Appendix D

Notes: <sup>a</sup>Samples for the analysis of metals will be field-filtered using a 0.45 micron in-line filter.

Laboratory analytes are limited to those based on the analytical methods listed in the OLF M&M Plan.

### **3.1.11.1 Data Evaluation**

Analytical results for GS59 and GS05 are compared, per Figure 12 in Appendix D, to the appropriate surface water standard in Table 1 of Attachment 2 to RFLMA. For the third quarter CY 2007 samples, all analytical results were acceptable.

Results from monitoring the RCRA wells at the OLF (Appendix A) will be discussed and statistically evaluated as part of the 2007 Annual Report.

### **3.1.12 Groundwater Treatment System Monitoring**

Contaminated groundwater is intercepted and treated in four areas of the Site. Three of these systems (MSPTS, ETPTS, and SPPTS) include a groundwater intercept trench (collection trench), which is similar to a French drain with an impermeable membrane on the downgradient side. Groundwater entering the trench is routed through a drain pipe into one or more treatment cells, where it is treated and then discharged to surface water. The fourth system (PLFTS) treats water from the north and south components of the GWIS and flow from the PLF seep.

Water monitoring at the MSPTS, ETPTS, and SPPTS includes a minimum of three sample collection points: untreated influent entering the treatment system, treated effluent exiting the

system, and a surface water performance location. At the PLFTS, the treated effluent and surface water sampling locations are typically the same; this is discussed in further detail below.

The fundamental questions at each system are whether (1) influent water quality indicates treatment is still necessary, (2) effluent water quality indicates system maintenance is required, and (3) surface water quality suggests impacts from inadequate treatment of influent.

### **3.1.12.1 MSPTS**

Monitoring locations specific to the MSPTS are shown on Figure 3–1. Sampling and data evaluation protocols are summarized in Table 3–27. In addition to the monitoring locations shown, several piezometers are present within the collection trench. Although these are no longer routinely monitored, they are retained for troubleshooting purposes.

*Table 3–27. Sampling and Data Evaluation Protocols at MSPTS Monitoring Locations*

<b>Location Code</b>	<b>Location Description</b>	<b>Sample Types/Frequencies</b>	<b>Analytics</b>	<b>Data Evaluation</b>
MOUND R1-0	Influent sampling location	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 11 in Appendix D
MOUND R2-E	Effluent sampling location	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 11 in Appendix D
GS10	Downgradient surface water performance location	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 11 in Appendix D

#### ***Data Evaluation***

MSPTS locations listed above were not scheduled for routine monitoring in the third quarter of CY 2007. However, nonroutine sampling was performed to support maintenance activities focusing on optimizing the effectiveness of the system (see Section 2.3). Results are provided in Appendix A and will be evaluated as part of the 2007 Annual Report.

### **3.1.12.2 ETPTS**

Monitoring locations specific to the ETPTS are shown on Figure 3–1. Sampling and data evaluation protocols are summarized in Table 3–28. In addition to the monitoring locations shown, several piezometers are present within the collection trench. Although these are no longer routinely monitored, they are retained for troubleshooting purposes.

*Table 3–28. Sampling and Data Evaluation Protocols at ETPTS Monitoring Locations*

Location Code	Location Description	Sample Types/Frequencies	Analytes	Data Evaluation
ET INFLUENT	Influent sampling location	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 11 in Appendix D
ET EFFLUENT	Effluent sampling location	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 11 in Appendix D
POM2	Downgradient surface water performance location	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	see Figure 11 in Appendix D

### ***Data Evaluation***

ETPTS locations listed above were not scheduled for routine monitoring in the third quarter of CY 2007. However, nonroutine sampling was performed to support maintenance activities focusing on optimizing the effectiveness of the system (see Section 2.3). Results are provided in Appendix A and will be evaluated as part of the 2007 Annual Report.

#### ***3.1.12.3 SPPTS***

Monitoring locations specific to the SPPTS are presented on Figure 3–1. Sampling and data evaluation protocols are summarized in Table 3–29. In addition to the monitoring locations, several piezometers were installed within the collection trench. Although these are no longer routinely monitored, they are retained for troubleshooting purposes.

*Table 3–29. Sampling and Data Evaluation Protocols at SPPTS Monitoring Locations*

Location Code	Location Description	Sample Types/Frequencies	Analytes	Data Evaluation
SPIN	Influent sampling location	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	U, nitrate	see Figure 11 in Appendix D
SPPMM01	Effluent sampling location	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	U, nitrate	see Figure 11 in Appendix D
GS13	Downgradient surface water performance location	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	U, nitrate	see Figure 11 in Appendix D

Notes: <sup>a</sup>Samples collected for U at GS13 will typically be flow-paced, unfiltered, and analyzed for U isotopes; however, if desired they may be collected as grab samples and field-filtered. U data at GS13 support other monitoring objectives that are not addressed here.

Nitrate is analyzed as nitrate+nitrite as N; this result is conservatively compared to the nitrate standard only.

### ***Data Evaluation***

SPPTS locations listed above were not scheduled for routine monitoring in the third quarter of CY 2007. However, these locations, as well as the SPP Discharge Gallery, were monitored to support the continuing special evaluation of system performance begun following system repairs completed in September 2006. As with previous results, these (see Appendix A) indicate nitrate

and U continue to be removed from groundwater flowing through the SPPTS and the repairs have been successful. This special performance evaluation was therefore terminated. The performance of the system will be evaluated as part of the 2007 Annual Report.

Locations GS13 and the SPP Discharge Gallery were also monitored for specialized analysis of U isotopes. See Appendix E for more information. The average of the two samples from the latter location (one collected in 2002, one in 2007) sent to LANL for U analysis remains predominantly natural, but the most recent sample had a greater anthropogenic than natural content. The likely reason for this change is natural variability in response to the wide range of physical influences (climate, groundwater recharge, and so on). This topic will be discussed at greater length in the 2007 Annual Report.

Table 3–30 summarizes sampling conducted at SPPTS locations in the third quarter of 2007.

*Table 3–30. SPPTS Monitoring in Third Quarter 2007*

<b>Location</b>	<b>Sample Dates</b>	<b>Samples Collected</b>
SPIN	July 16, 2007	Nitrate, U (grab samples)
SPPMM01	July 16, 2007	Nitrate, U (grab samples)
SPP Discharge Gallery	July 16, 2007	Nitrate, U (grab samples)
SPP Discharge Gallery	September 12, 2007	LANL U and screening suite (grab samples)
GS13	July 30–November 8, 2007	LANL U (automated composite sample)

Note: Location GS13 was also monitored to support routine surface water monitoring objectives. See text on surface water monitoring for details.

### **3.1.12.4 PLFTS**

This objective deals with monitoring surface water and groundwater at the PLF to determine the short- and long-term effectiveness of the remedy. These requirements were initially identified in the *Final Interim Measure/Interim Remedial Action for IHSS 114 and RCRA Closure of the RFETS Present Landfill*, Appendix B: Post-Accelerated Action Monitoring and Long-Term Surveillance and Monitoring Considerations (DOE 2004), and finalized in the PLF M&M Plan (DOE 2006b).

Water monitoring locations for the PLF are shown on Figure 3–1. The general groundwater monitoring requirements deal specifically with the RCRA wells and are discussed in detail in Section 3.1.10, “Present Landfill Monitoring.” Details regarding surface water and treatment system monitoring are provided below.

As part of PLF closure, a passive seep interception and treatment system was installed to treat landfill seep water and GWIS water. There are three sources of influent to the treatment system: two GWIS pipes and the PLF seep. Effluent for the treatment system eventually flows to the Landfill Pond. This section presents the monitoring data for the treatment system effluent as well as the Landfill Pond if the treatment system effluent exceeds surface water standards. Details regarding PLFTS monitoring can be found in the PLF M&M Plan.

Water monitoring locations for the PLFTS are shown on Figure 3–1. Sampling and data evaluation protocols are summarized in Table 3–31.

*Table 3–31. Sampling and Data Evaluation Protocols at PLFTS Monitoring Locations*

Location Code	Location Description	Sample Types/Frequencies	Analytes	Data Evaluation
GWISINFNORTH	Northern GWIS influent to the treatment system	Quarterly grabs	VOCs, isotopic U, total and dissolved metals, nitrate	see Figure 11 in Appendix D
GWISINFSOUTH	Southern GWIS influent to the treatment system	Quarterly grabs	VOCs, isotopic U, total and dissolved metals, nitrate	see Figure 11 in Appendix D
PLFSEEPINF	Landfill seep influent to the treatment system	Quarterly grabs	VOCs, isotopic U, total and dissolved metals	see Figure 11 in Appendix D
PLFSYSEFF	Effluent from the treatment system	Quarterly grabs	VOCs, isotopic U, total and dissolved metals, SVOCs	see Figure 11 in Appendix D
PLFPONDEFF	Landfill Pond at the downstream (east) end	As needed; triggered by data evaluation	As needed; determined by decision rule	see Figure 11 in Appendix D

Note: Nitrate is analyzed as nitrate+nitrite as N.

### ***Data Evaluation***

Table 3–32 summarizes the PLF routine quarterly sample collection for the third quarter of CY 2007. During collection of the July 25, 2007, sample at the PLFSEEPINF, the flow rate was 2.03 gallons per minute. As of September 30, 2007, the Landfill Pond outlet remained in a closed configuration.

Refer to the analytical data accompanying this document (Appendix A).

*Table 3–32. Third Quarter of CY 2007 Routine Grab Sampling at the PLF*

Location Code	Collection Date/Time	Analytes
GWISINFNORTH	7/25/07 10:30	VOCs, isotopic U, total and dissolved metals, nitrate+nitrite
GWISINFSOUTH	DRY	NA
PLFSEEPINF	7/25/07 10:15	VOCs, isotopic U, total and dissolved metals
PLFSYSEFF	7/25/07 10:00	VOCs, isotopic U, total and dissolved metals, SVOCs

NA = not applicable.

Analytical results for the treatment system effluent (PLFSYSEFF) are compared to the appropriate surface water standards listed in Table 1 of Attachment 2 to RFLMA. During the routine quarterly sampling, the analytical result for vinyl chloride was greater than the applicable surface water PQL (Table 3–33).

*Table 3–33. Present Landfill Treatment System Effluent (PLFSYSEFF): Summary of Routine Third Quarter of CY 2007 Grab Sampling Analytical Results Exceeding RFLMA Surface Water Standards (July 25, 2007 Sample)*

Analyte	Result	Units	RFLMA Standard	Basis for Standard <sup>a</sup>
Vinyl chloride	0.888	µg/L	0.2 (PQL)	W+F

Note: <sup>a</sup>Basis acronyms: W+F = Water plus Fish.

For vinyl chloride at PLFSYSEFF (Table 3–33), the routine quarterly result was the third consecutive month with vinyl chloride results greater than the PQL (monthly sampling was previously initiated at the PLFSYSEFF following the second quarter of CY 2007 sample result per the RFLMA flow chart; see Table 3–34 for sampling detail). The three consecutive months of vinyl chloride results greater than the PQL subsequently triggered sampling of the Landfill Pond (PLFPONDEFF) per the RFLMA flow chart. This sample was collected on September 6, 2007; vinyl chloride was not detected in that sample.

*Table 3–34. Present Landfill Treatment System Effluent (PLFSYSEFF): Summary of Monthly Analytical Results*

Analyte	Sample Date	Result	Units
Vinyl chloride	5/1/07	<b>0.803</b>	µg/L
	6/5/07	1.4	µg/L
	7/25/07	0.888	µg/L
	Status:	Sampled Landfill Pond on 9/6/07; vinyl chloride was not detected.	

Note: The initial result triggering monthly sampling is shown in **bold**. The routine quarterly samples are shown in italics.

### 3.1.13 Pre-Discharge Monitoring

This monitoring objective deals with pre-discharge sampling of Ponds A-4, B-5, and C-2, or any other upstream pond functioning as a terminal pond, as a BMP to indicate compliance with surface water quality standards (see Table 1 of Attachment 2 to RFLMA) at the downstream POCs. Pre-discharge samples are collected at Ponds A-4, B-5, and C-2 on North Walnut Creek, South Walnut Creek, and Woman Creek, respectively. These locations are shown on Figure 3–1. Sampling and data evaluation protocols are summarized in Table 3–35.

*Table 3–35. Sampling and Data Evaluation Protocols at Pre-Discharge Monitoring Locations*

Location Code	Location Description	Sample Types/ Frequencies	Analytes	Data Evaluation
A4 POND	Pond A-4 at east end of pond near outlet works	Prior to discharge	Pu, Am, isotopic U <sup>a</sup> , nitrate	Consultation with regulators prior to discharge
B5 POND	Pond B-5 at east end of pond near outlet works	Prior to discharge	Pu, Am, isotopic U, nitrate	Consultation with regulators prior to discharge
C2 POND	Pond C-2 at east end of pond near outlet works	Prior to discharge	Pu, Am, isotopic U	Consultation with regulators prior to discharge

Notes: <sup>a</sup>Isotopes U-233,234; U-235; U-238.

Nitrate is analyzed as nitrate+nitrite; the nitrate+nitrite result is conservatively compared to the nitrate standard only.

### **3.1.13.1 Data Evaluation**

No ponds were pre-discharge sampled during the third quarter of CY 2007.

## **3.2 Ecological Monitoring**

During the third quarter of 2007, the Ecology Program provided regulatory support for project planning, conducted regulatory monitoring, conducted erosion control M&M, planned and provided project oversight for weed control activities, conducted revegetation and planting activities at various locations at the Site, and planned and conducted revegetation monitoring.

### **3.2.1 Regulatory Project Support**

Ecology staff provided continued support in the planning and implementation for several projects which started in the third quarter, including the Roads III project, FC-1/B371 excavation/fill project, 991 slump repair, and the annual dam mowing and riprap spraying project. Wetland and PMJM issues are addressed during the planning stages of projects to first, avoid potential impacts, and where that was not possible to minimize impacts to the greatest extent practicable. Project notifications were prepared for submittal to the U.S. Fish and Wildlife Service (USFWS) for the Roads III and annual dam mowing and riprap spraying because portions of these projects occurred in PMJM habitat.

### **3.2.2 Regulatory Monitoring**

The vegetation surveys for the OLF and PLF were conducted monthly as required during the third quarter. The monthly weed surveys in the mitigation wetlands, as required in the Wetland M&M Plan for the Site, were completed for July and August (not required in September). The issue of woody vegetation that is beginning to establish on the OLF or PLF covers continues to be a problem. Several woody plants have already been removed from the east face on the PLF and around the wet areas on the OLF where the seeps occur. This is going to be an ongoing maintenance issue because of the wet conditions that are present. The current path forward to prevent the establishment of these species on the landfill covers will be to spot spray or cut and spray the shoots of these species on an annual basis (or more frequently if needed). In addition, tamarisk has been found establishing at several of the mitigation wetland areas at the Site. It is assumed that waterfowl may be transporting seed into these wetland from other locations, since prior to site closure tamarisk was not a problem at the Site and the same contractors were not used to construct each of them. Tamarisk found in 2007 were cut off at the base and the stumps treated with herbicide to prevent regrowth.

PMJM mitigation and wetland mitigation monitoring efforts were conducted during the third quarter of 2007. Monitoring activities included both qualitative and quantitative vegetation monitoring along with photopoint monitoring. The results of this monitoring will be presented in the annual reports that are due to USFWS and EPA on December 1, 2007, and March 1, 2008, respectively.

### **3.2.3 Revegetation/Erosion Control**

During the third quarter, revegetation projects were begun at several locations that needed soil amendments added due to poor substrate conditions or where project activities were occurring.

At the FC-1/B371 fill project, excavation of material from the east side of the bottom of FC-1 was used to fill the area around wells south of where B371 used to sit. After the excavation of the bottom of FC-1 was completed, the area was configured to promote wetland establishment. The total acreage of these different revegetation areas begun during the third quarter was approximately 22.5 acres. Planning was also begun for the 991 slump repair revegetation project.

A large fertilizer spreader (to be pulled behind an all-terrain vehicle [ATV]) was purchased to allow Site staff to add soil amendments such as Biosol® or Sustane® (slow-release fertilizer amendments) and mycorrhizal fungi inoculant to enhance revegetation efforts at specific locations. This piece of equipment, in addition to the ATV mower and the ATV broadcast seeder, will provide Site staff effective resources for managing the revegetation locations. Additional seed was ordered and delivered during the third quarter for use in reseeding efforts this fall and winter.

At various locations around the Site small repairs were made as needed to erosion control structures. Erosion control surveys were conducted in PMJM habitat per the Programmatic Biological Assessment Part II requirements. Initial mapping of erosion control structures at the Site was begun to develop a monitoring map and protocol for erosion control monitoring per the requirements in the *Erosion Control Plan for Rocky Flats Property Central Operable Unit* (DOE 2007f). The final map will be used to track and identify locations of erosion controls that will be monitored until they are no longer needed.

### **3.2.4 Weed Control/Monitoring**

Weed surveys were conducted within the COU to identify potential locations for fall herbicide applications. After deciding on areas needing treatment, Ecology personnel met with the herbicide application subcontractor and toured the various locations identified. Approximately 441 acres of revegetation areas and native prairie areas were treated with herbicides to control noxious weeds during the third quarter of 2007. Areas were located both in the COU and POU areas. Targeted weed species during the fall applications included diffuse knapweed and Canada thistle. Maps and treatments used at specific locations will be provided in the 2007 Annual Report.

Weed mapping was conducted for diffuse knapweed inside the COU fence. Additional species were mapped on a fortuitous basis as they were observed.

Spraying was also conducted on the riprap areas on the dams to remove vegetation (and control noxious weeds) from these areas as required by the state dam inspections.

### **3.2.5 Wetland Maintenance/Plantings**

Approximately 275 plant plugs of western wheatgrass, three-square sedge, and Wood's rose were obtained for free from Ottertail Environmental Consulting Company in Golden. (The free plugs were obtained after a professional colleague called and asked if the Site could use the plants that were leftover from one of their projects.) The western wheatgrass and three-square sedge plugs were planted around Seep #7 on the OLF, while the Wood's rose plugs were planted around the edges of the FC-2 and FC-4 wetland areas.

### **3.2.6 General Monitoring/Field Activities**

Revegetation monitoring was conducted during the third quarter of 2007 across the Site at revegetation locations. Approximately 670 quadrats were sampled at 36 revegetation locations. Photopoint monitoring was also conducted at locations where photographs were taken in previous years to document the vegetation establishment at the Site. These time-series photos document the transformation of the former Industrial Area to natural areas. The monitoring data and photomonitored results will be presented in the 2007 Annual Report.

## **3.3 RFLMA Ecological Sampling**

The Ecological Risk Assessment determined that residual contamination does not represent a significant risk of adverse ecological effects. The CAD/ROD, however, requires that specific additional sampling be conducted to reduce the uncertainties determined in the Ecological Risk Assessment. RFLMA Attachment 2, Table 5, Ecological Sampling, specifies a minimum of three quarterly water samples at Ponds A-4, B-5, and C-2 for radium-228, cyanide, and ammonia. Ecological sampling and data evaluation protocols are summarized in Table 3-36. These locations are shown on Figure 3-1.

The first quarterly water sampling at Pond C-2 was performed on February 12, 2007. Ponds A-4 and B-5 were sampled for radium-228 and ammonia on February 12, 2007, and for cyanide on March 19, 2007. The second quarterly water sampling was performed at Ponds A-4, B-5, and C-2 on May 4, 2007. The third quarterly water sampling was performed at Ponds A-4, B-5, and C-2 on September 12, 2007. Sediment sampling was performed at Ponds A-4, B-5, and C-2 on July 13, 2007.

*Table 3-36. Sampling and Data Evaluation Protocols for RFLMA Ecological Sampling*

<b>Location Code</b>	<b>Location Description</b>	<b>Sample Types/ Frequencies</b>	<b>Analytes</b>	<b>Data Evaluation</b>
A4 POND	Pond A-4 at east end of pond near outlet works (water); at deepest location in pond (sediment)	Quarterly grabs (water); One-time (sediment)	Ammonia, cyanide, Ra-228	Consultation with regulators
B5 POND	Pond B-5 at east end of pond near outlet works (water); at deepest location in pond (sediment)	Quarterly grabs (water); One-time (sediment)	Ammonia, cyanide, Ra-228	Consultation with regulators
C2 POND	Pond C-2 at east end of pond near outlet works (water); at deepest location in pond (sediment)	Quarterly grabs (water); One-time (sediment)	Ammonia, cyanide, Ra-228	Consultation with regulators

### **3.3.1 Data Evaluation**

The minimum required sampling was completed in the third quarter of CY 2007. Refer to the analytical data accompanying this document for the completed sampling and analysis information. Validated analytical results for the samples collected in the third quarter of CY 2007 were available in the fourth quarter of CY 2007, and the evaluation is not complete for inclusion in this quarterly report. The data are being evaluated and DOE will consult with

CDPHE regarding the relevance of the data to the ecological risks and the uncertainty identified in the CAD/ROD, as required by RFLMA. The results of the evaluation and consultation will be documented in a report and a RFLMA contact record. The report will be included in the quarterly or annual report for the period during which the consultation is completed.

End of current text

## 4.0 References

CDPHE, DOE, and EPA (Colorado Department of Public Health and Environment, U.S. Department of Energy, and U.S. Environmental Protection Agency), 1996. *Final Rocky Flats Cleanup Agreement*, Federal Facility Agreement and Consent Order, CERCLA VIII-96-21 RCRA (3008(h)) VIII-96-01, State of Colorado Docket #96-07-19-01.

DOE (U.S. Department of Energy), 2004. *Final Interim Measures/Interim Remedial Action for IHSS 114 and RCRA Closure of the RFETS Present Landfill*, “Appendix B: Post-Accelerated Action Monitoring and Long-Term Surveillance and Monitoring Considerations,” Golden, Colorado.

DOE (U.S. Department of Energy), 2005a. *Final Interim Measure/Interim Remedial Action for the Original Landfill*, March.

DOE (U.S. Department of Energy), 2005b. *Rocky Flats Site, Colorado, Revegetation Plan*, U.S. Department of Energy, Rocky Flats Office of Legacy Management, Broomfield, Colorado, December.

DOE (U.S. Department of Energy), 2005c. *Rocky Flats, Colorado, Site Vegetation Management Plan*, U.S. Department of Energy, Rocky Flats Office of Legacy Management, Broomfield, Colorado, December.

DOE (U.S. Department of Energy), 2006a. *Final Landfill Monitoring and Maintenance Plan, Rocky Flats Environmental Technology Site, Original Landfill*, Rocky Flats Environmental Technology Site, Golden, Colorado, February.

DOE (U.S. Department of Energy), 2006b. *Present Landfill Monitoring and Maintenance Plan and Post-Closure Plan*, Rocky Flats Environmental Technology Site, Golden, Colorado, May.

DOE (U.S. Department of Energy), 2006c. *RCRA Facility Investigation-Remedial Investigation/Corrective Measures Study-Feasibility Study Report for the Rocky Flats Environmental Technology Site*, June.

DOE (U.S. Department of Energy), 2006d. *2006 Integrated Monitoring Plan Background Document*, Rocky Flats Site, July.

DOE (U.S. Department of Energy), 2006e. *2006 Integrated Monitoring Plan Summary Document*, Rocky Flats Site, July.

DOE (U.S. Department of Energy), CAD/ROD 2006f. *Corrective Action Decision/Record of Decision for Rocky Flats Plant (USDOE) Peripheral Operable Unit and Central Operable Unit*, September.

DOE (U.S. Department of Energy), 2006g. *Quarterly Report of Site Surveillance and Maintenance Activities: Second Quarter Calendar Year 2006*, Rocky Flats Site, Golden, Colorado, September.

DOE (U.S. Department of Energy), 2007a. *Quarterly Report of Site Surveillance and Maintenance Activities: Third Quarter Calendar Year 2006*, Rocky Flats Site, Golden, Colorado, January.

DOE (U.S. Department of Energy), 2007b. *Rocky Flats Site Operations Guide*, February.

DOE (U.S. Department of Energy), 2007c. *Rocky Flats Legacy Management Agreement*, March 14.

DOE (U.S. Department of Energy), 2007d. *Rocky Flats Site Annual Report of Site Surveillance and Maintenance Activities, Calendar Year 2006*, Office of Legacy Management, Grand Junction, Colorado, April.

DOE (U.S. Department of Energy), 2007e. *Operations and Maintenance Manual for the Rocky Flats Ground Water Treatment Systems*, June.

DOE (U.S. Department of Energy), 2007f. *Erosion Control Plan for the Rocky Flats Property Central Operable Unit*, July.

DOE (U.S. Department of Energy), 2007g. *Operations and Maintenance Plan for Rocky Flats Surface Water Control Project*, in production.

DOE (U.S. Department of Energy), 2007h. *Annual Rocky Flats Site Ecological Field Sampling Plan*, in production.

DOE (U.S. Department of Energy), 2007i. *Ecological Monitoring Methods Handbook*, Office of Legacy Management, Grand Junction, Colorado, in production.

Friedlander, G., J.W. Kennedy, E.S. Macias, and J.M. Miller, 1981. *Nuclear and Radiochemistry*, John Wiley and Sons, New York.

Janecky, D.R., 2006. "Quantitative Evaluation of Mixture Components in RFETS Uranium Isotopic Analyses," in DOE 2006c, *RCRA Facility Investigation – Remedial Investigation/Corrective Measures Study – Feasibility Study Report for the Rocky Flats Environmental Technology Site*, June, Attachment 3 to Section 8.

Janecky, D.R., M. Murrell, and D. Norman, 2007. *Thermal Ionization Mass Spectrometry Uranium Results for October 2007 RFETS Waters*, LA-UR-07-7737, LANL, December.

## **Appendix A**

### **Analytical Results for Water Samples—Third Quarter of CY 2007**

## Appendix A

Analytical Results for Water Samples - Third Quarter of CY 2007

LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE_ID	RESULT	UNITS	LAB_QUALIFIERS	SAMPLE_TYPE	DETECTION LIMIT	UNCERTAINTY	DATA VALIDATION QUALIFIERS
70193	WL	8/22/2007	07081132	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
70193	WL	8/22/2007	07081132	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
70193	WL	8/22/2007	07081132	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
70193	WL	8/22/2007	07081132	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
70193	WL	8/22/2007	07081132	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
70193	WL	8/22/2007	07081132	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
70193	WL	8/22/2007	07081132	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
70193	WL	8/22/2007	07081132	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
70193	WL	8/22/2007	07081132	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
70193	WL	8/22/2007	07081132	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
70193	WL	8/22/2007	07081132	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
70193	WL	8/22/2007	07081132	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
70193	WL	8/22/2007	07081132	000107-02-8	Acrolein	N001	2.8	ug/L	U	F	2.8		valid
70193	WL	8/22/2007	07081132	000107-13-1	Acrylonitrile	N001	1.4	ug/L	U	F	1.4		valid
70193	WL	8/22/2007	07081132	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
70193	WL	8/22/2007	07081132	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
70193	WL	8/22/2007	07081132	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
70193	WL	8/22/2007	07081132	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
70193	WL	8/22/2007	07081132	07440-43-9	Cadmium	N001	0.45	ug/L	U	F	0.45		valid
70193	WL	8/22/2007	07081132	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
70193	WL	8/22/2007	07081132	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
70193	WL	8/22/2007	07081132	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
70193	WL	8/22/2007	07081132	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
70193	WL	8/22/2007	07081132	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
70193	WL	8/22/2007	07081132	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
70193	WL	8/22/2007	07081132	07440-50-8	Copper	N001	4.5	ug/L	U	F	4.5		valid
70193	WL	8/22/2007	07081132	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
70193	WL	8/22/2007	07081132	07439-92-1	Lead	N001	2.6	ug/L	U	F	2.6		valid
70193	WL	8/22/2007	07081132	M&P XYLENE	m,p-Xylene	N001	0.34	ug/L	U	F	0.34		valid
70193	WL	8/22/2007	07081132	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
70193	WL	8/22/2007	07081132	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
70193	WL	8/22/2007	07081132	07440-02-0	Nickel	N001	7.8	ug/L	U	F	7.8		valid
70193	WL	8/22/2007	07081132	000095-47-6	o-Xylene	N001	0.19	ug/L	U	F	0.19		valid
70193	WL	8/22/2007	07081132	07440-22-4	Silver	N001	2.8	ug/L	U	F	2.8		valid
70193	WL	8/22/2007	07081132	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
70193	WL	8/22/2007	07081132	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
70193	WL	8/22/2007	07081132	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
70193	WL	8/22/2007	07081132	000100-41-4	Total Xylene	N001	0.16	ug/L	U	F	0.16		valid
70193	WL	8/22/2007	07081132	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
70193	WL	8/22/2007	07081132	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
70193	WL	8/22/2007	07081132	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
70193	WL	8/22/2007	07081132	07440-61-1	Uranium	N001	16	ug/L	U	F	16		valid
70193	WL	8/22/2007	07081132	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
70193	WL	8/22/2007	07081132	07440-66-6	Zinc	N001	6.5	ug/L	B	F	4.5	U	
70393	WL	8/22/2007	07081132	000071-55-6	1,1,1-Trichloroethane	N001	3	ug/L	U	F	0.16		valid
70393	WL	8/22/2007	07081132	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
70393	WL	8/22/2007	07081132	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
70393	WL	8/22/2007	07081132	000075-35-4	1,1-Dichloroethene	N001	4.5	ug/L	U	F	0.14		valid
70393	WL	8/22/2007	07081132	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
70393	WL	8/22/2007	07081132	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
70393	WL	8/22/2007	07081132	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
70393	WL	8/22/2007	07081132	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
70393	WL	8/22/2007	07081132	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
70393	WL	8/22/2007	07081132	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
70393	WL	8/22/2007	07081132	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
70393	WL	8/22/2007	07081132	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid

## Appendix A

Analytical Results for Water Samples - Third Quarter of CY 2007

LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE_ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE_TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
70393	WL	8/22/2007	07081132	000107-02-8	Acrolein	N001	2.8	ug/L	U	F	2.8		valid
70393	WL	8/22/2007	07081132	000107-13-1	Acrylonitrile	N001	1.4	ug/L	U	F	1.4		valid
70393	WL	8/22/2007	07081132	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
70393	WL	8/22/2007	07081132	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
70393	WL	8/22/2007	07081132	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
70393	WL	8/22/2007	07081132	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
70393	WL	8/22/2007	07081132	07440-43-9	Cadmium	0001	0.45	ug/L	U	F	0.45		valid
70393	WL	8/22/2007	07081132	000056-23-5	Carbon tetrachloride	N001	0.21	ug/L	J	F	0.19		valid
70393	WL	8/22/2007	07081132	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
70393	WL	8/22/2007	07081132	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
70393	WL	8/22/2007	07081132	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
70393	WL	8/22/2007	07081132	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
70393	WL	8/22/2007	07081132	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
70393	WL	8/22/2007	07081132	07440-50-8	Copper	0001	4.5	ug/L	U	F	4.5		valid
70393	WL	8/22/2007	07081132	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
70393	WL	8/22/2007	07081132	07439-92-1	Lead	0001	2.6	ug/L	U	F	2.6		valid
70393	WL	8/22/2007	07081132	M&P XYLENE	m,p-Xylene	N001	0.34	ug/L	U	F	0.34		valid
70393	WL	8/22/2007	07081132	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
70393	WL	8/22/2007	07081132	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
70393	WL	8/22/2007	07081132	07440-02-0	Nickel	0001	7.8	ug/L	U	F	7.8		valid
70393	WL	8/22/2007	07081132	000095-47-6	o-Xylene	N001	0.19	ug/L	U	F	0.19		valid
70393	WL	8/22/2007	07081132	07440-22-4	Silver	0001	2.8	ug/L	U	F	2.8		valid
70393	WL	8/22/2007	07081132	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
70393	WL	8/22/2007	07081132	000127-18-4	Tetrachloroethene	N001	2.2	ug/L		F	0.2		valid
70393	WL	8/22/2007	07081132	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
70393	WL	8/22/2007	07081132	000100-41-4	Total Xylene	N001	0.16	ug/L	U	F	0.16		valid
70393	WL	8/22/2007	07081132	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
70393	WL	8/22/2007	07081132	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
70393	WL	8/22/2007	07081132	000079-01-6	Trichloroethene	N001	8.6	ug/L		F	0.16		valid
70393	WL	8/22/2007	07081132	07440-61-1	Uranium	0001	23	ug/L	B	F	16		valid
70393	WL	8/22/2007	07081132	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
70393	WL	8/22/2007	07081132	07440-66-6	Zinc	0001	5.8	ug/L	B	F	4.5		U
70693	WL	8/22/2007	07081132	000071-55-6	1,1,1-Trichloroethane	N001	3.5	ug/L		F	0.16		valid
70693	WL	8/22/2007	07081132	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
70693	WL	8/22/2007	07081132	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
70693	WL	8/22/2007	07081132	000075-35-4	1,1-Dichloroethene	N001	4.3	ug/L		F	0.14		valid
70693	WL	8/22/2007	07081132	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
70693	WL	8/22/2007	07081132	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
70693	WL	8/22/2007	07081132	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
70693	WL	8/22/2007	07081132	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
70693	WL	8/22/2007	07081132	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
70693	WL	8/22/2007	07081132	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
70693	WL	8/22/2007	07081132	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
70693	WL	8/22/2007	07081132	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
70693	WL	8/22/2007	07081132	000107-02-8	Acrolein	N001	2.8	ug/L	U	F	2.8		valid
70693	WL	8/22/2007	07081132	000107-13-1	Acrylonitrile	N001	1.4	ug/L	U	F	1.4		valid
70693	WL	8/22/2007	07081132	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
70693	WL	8/22/2007	07081132	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
70693	WL	8/22/2007	07081132	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
70693	WL	8/22/2007	07081132	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
70693	WL	8/22/2007	07081132	07440-43-9	Cadmium	0001	0.45	ug/L	U	F	0.45		valid
70693	WL	8/22/2007	07081132	000056-23-5	Carbon tetrachloride	N001	0.25	ug/L	J	F	0.19		valid
70693	WL	8/22/2007	07081132	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
70693	WL	8/22/2007	07081132	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
70693	WL	8/22/2007	07081132	000067-66-3	Chloroform	N001	0.2	ug/L	J	F	0.16		valid
70693	WL	8/22/2007	07081132	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
70693	WL	8/22/2007	07081132	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid

## Appendix A

## Analytical Results for Water Samples - Third Quarter of CY 2007

LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
70693	WL	8/22/2007	07081132	07440-50-8	Copper	N001	4.5	ug/L	U	F	4.5		valid
70693	WL	8/22/2007	07081132	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
70693	WL	8/22/2007	07081132	07439-92-1	Lead	N001	2.6	ug/L	U	F	2.6		valid
70693	WL	8/22/2007	07081132	M&P XYLENE	m,p-Xylene	N001	0.34	ug/L	U	F	0.34		valid
70693	WL	8/22/2007	07081132	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
70693	WL	8/22/2007	07081132	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
70693	WL	8/22/2007	07081132	07440-02-0	Nickel	N001	7.8	ug/L	U	F	7.8		valid
70693	WL	8/22/2007	07081132	000095-47-6	o-Xylene	N001	0.19	ug/L	U	F	0.19		valid
70693	WL	8/22/2007	07081132	07440-22-4	Silver	N001	2.8	ug/L	U	F	2.8		valid
70693	WL	8/22/2007	07081132	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
70693	WL	8/22/2007	07081132	000127-18-4	Tetrachloroethene	N001	1.1	ug/L	U	F	0.2		valid
70693	WL	8/22/2007	07081132	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
70693	WL	8/22/2007	07081132	000100-41-4	Total Xylene	N001	0.16	ug/L	U	F	0.16		valid
70693	WL	8/22/2007	07081132	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
70693	WL	8/22/2007	07081132	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
70693	WL	8/22/2007	07081132	000079-01-6	Trichloroethene	N001	3	ug/L	U	F	0.16		valid
70693	WL	8/22/2007	07081132	07440-61-1	Uranium	N001	16	ug/L	U	F	16		valid
70693	WL	8/22/2007	07081132	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
70693	WL	8/22/2007	07081132	07440-66-6	Zinc	N001	6.9	ug/L	B	F	4.5	U	
73005	WL	8/30/2007	07091151	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
73005	WL	8/30/2007	07091151	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
73005	WL	8/30/2007	07091151	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
73005	WL	8/30/2007	07091151	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
73005	WL	8/30/2007	07091151	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
73005	WL	8/30/2007	07091151	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
73005	WL	8/30/2007	07091151	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
73005	WL	8/30/2007	07091151	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
73005	WL	8/30/2007	07091151	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
73005	WL	8/30/2007	07091151	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
73005	WL	8/30/2007	07091151	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
73005	WL	8/30/2007	07091151	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
73005	WL	8/30/2007	07091151	000107-02-8	Acrolein	N001	2.8	ug/L	U	F	2.8		valid
73005	WL	8/30/2007	07091151	000107-13-1	Acrylonitrile	N001	1.4	ug/L	U	F	1.4		valid
73005	WL	8/30/2007	07091151	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
73005	WL	8/30/2007	07091151	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
73005	WL	8/30/2007	07091151	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
73005	WL	8/30/2007	07091151	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
73005	WL	8/30/2007	07091151	07440-43-9	Cadmium	N001	0.45	ug/L	U	F	0.45		valid
73005	WL	8/30/2007	07091151	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
73005	WL	8/30/2007	07091151	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
73005	WL	8/30/2007	07091151	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
73005	WL	8/30/2007	07091151	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
73005	WL	8/30/2007	07091151	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
73005	WL	8/30/2007	07091151	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
73005	WL	8/30/2007	07091151	07440-50-8	Copper	N001	4.5	ug/L	U	F	4.5		valid
73005	WL	8/30/2007	07091151	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
73005	WL	8/30/2007	07091151	07439-92-1	Lead	N001	2.6	ug/L	U	F	2.6		valid
73005	WL	8/30/2007	07091151	M&P XYLENE	m,p-Xylene	N001	0.34	ug/L	U	F	0.34		valid
73005	WL	8/30/2007	07091151	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
73005	WL	8/30/2007	07091151	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
73005	WL	8/30/2007	07091151	07440-02-0	Nickel	N001	7.8	ug/L	U	F	7.8		valid
73005	WL	8/30/2007	07091151	000095-47-6	o-Xylene	N001	0.19	ug/L	U	F	0.19		valid
73005	WL	8/30/2007	07091151	07440-22-4	Silver	N001	2.8	ug/L	U	F	2.8		valid
73005	WL	8/30/2007	07091151	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
73005	WL	8/30/2007	07091151	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
73005	WL	8/30/2007	07091151	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
73005	WL	8/30/2007	07091151	000100-41-4	Total Xylene	N001	0.16	ug/L	U	F	0.16		valid

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LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE_ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE_TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
73005	WL	8/30/2007	07091151	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
73005	WL	8/30/2007	07091151	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
73005	WL	8/30/2007	07091151	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
73005	WL	8/30/2007	07091151	07440-61-1	Uranium	N001	23	ug/L	B	F	16		valid
73005	WL	8/30/2007	07091151	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
73005	WL	8/30/2007	07091151	07440-66-6	Zinc	N001	8.4	ug/L	B	F	4.5	U	
73105	WL	8/29/2007	07091151	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
73105	WL	8/29/2007	07091151	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
73105	WL	8/29/2007	07091151	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
73105	WL	8/29/2007	07091151	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
73105	WL	8/29/2007	07091151	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
73105	WL	8/29/2007	07091151	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
73105	WL	8/29/2007	07091151	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
73105	WL	8/29/2007	07091151	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
73105	WL	8/29/2007	07091151	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
73105	WL	8/29/2007	07091151	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
73105	WL	8/29/2007	07091151	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
73105	WL	8/29/2007	07091151	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
73105	WL	8/29/2007	07091151	000107-02-8	Acrolein	N001	2.8	ug/L	U	F	2.8		valid
73105	WL	8/29/2007	07091151	000107-13-1	Acrylonitrile	N001	1.4	ug/L	U	F	1.4		valid
73105	WL	8/29/2007	07091151	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
73105	WL	8/29/2007	07091151	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
73105	WL	8/29/2007	07091151	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
73105	WL	8/29/2007	07091151	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
73105	WL	8/29/2007	07091151	07440-43-9	Cadmium	N001	0.45	ug/L	U	F	0.45		valid
73105	WL	8/29/2007	07091151	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
73105	WL	8/29/2007	07091151	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
73105	WL	8/29/2007	07091151	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
73105	WL	8/29/2007	07091151	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
73105	WL	8/29/2007	07091151	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
73105	WL	8/29/2007	07091151	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
73105	WL	8/29/2007	07091151	07440-50-8	Copper	N001	4.5	ug/L	U	F	4.5		valid
73105	WL	8/29/2007	07091151	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
73105	WL	8/29/2007	07091151	07439-92-1	Lead	N001	2.6	ug/L	U	F	2.6		valid
73105	WL	8/29/2007	07091151	M&P XYLENE	m,p-Xylene	N001	0.34	ug/L	U	F	0.34		valid
73105	WL	8/29/2007	07091151	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
73105	WL	8/29/2007	07091151	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
73105	WL	8/29/2007	07091151	07440-02-0	Nickel	N001	7.8	ug/L	U	F	7.8		valid
73105	WL	8/29/2007	07091151	000095-47-6	o-Xylene	N001	0.19	ug/L	U	F	0.19		valid
73105	WL	8/29/2007	07091151	07440-22-4	Silver	N001	2.8	ug/L	U	F	2.8		valid
73105	WL	8/29/2007	07091151	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
73105	WL	8/29/2007	07091151	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
73105	WL	8/29/2007	07091151	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
73105	WL	8/29/2007	07091151	000100-41-4	Total Xylene	N001	0.16	ug/L	U	F	0.16		valid
73105	WL	8/29/2007	07091151	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
73105	WL	8/29/2007	07091151	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
73105	WL	8/29/2007	07091151	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
73105	WL	8/29/2007	07091151	07440-61-1	Uranium	N001	22	ug/L	B	F	16		valid
73105	WL	8/29/2007	07091151	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
73105	WL	8/29/2007	07091151	07440-66-6	Zinc	N001	11	ug/L	B	F	4.5	U	
73205	WL	8/28/2007	07081132	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
73205	WL	8/28/2007	07081132	000071-55-6	1,1,2-Trichloroethane	N002	0.16	ug/L	U	D	0.16		valid
73205	WL	8/28/2007	07081132	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
73205	WL	8/28/2007	07081132	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	D	0.2		valid
73205	WL	8/28/2007	07081132	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
73205	WL	8/28/2007	07081132	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	D	0.32		valid
73205	WL	8/28/2007	07081132	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid

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LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE_ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE_TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
73205	WL	8/28/2007	07081132	000075-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	D	0.14		valid
73205	WL	8/28/2007	07081132	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
73205	WL	8/28/2007	07081132	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	D	0.32		valid
73205	WL	8/28/2007	07081132	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
73205	WL	8/28/2007	07081132	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	D	1.5		valid
73205	WL	8/28/2007	07081132	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
73205	WL	8/28/2007	07081132	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	D	0.18		valid
73205	WL	8/28/2007	07081132	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
73205	WL	8/28/2007	07081132	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	D	0.13		valid
73205	WL	8/28/2007	07081132	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
73205	WL	8/28/2007	07081132	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	D	0.13		valid
73205	WL	8/28/2007	07081132	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
73205	WL	8/28/2007	07081132	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	D	0.13		valid
73205	WL	8/28/2007	07081132	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
73205	WL	8/28/2007	07081132	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		valid
73205	WL	8/28/2007	07081132	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
73205	WL	8/28/2007	07081132	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		valid
73205	WL	8/28/2007	07081132	000107-02-8	Acrolein	N001	2.8	ug/L	U	F	2.8		valid
73205	WL	8/28/2007	07081132	000107-02-8	Acrolein	N002	2.8	ug/L	U	D	2.8		valid
73205	WL	8/28/2007	07081132	000107-13-1	Acrylonitrile	N001	1.4	ug/L	U	F	1.4		valid
73205	WL	8/28/2007	07081132	000107-13-1	Acrylonitrile	N002	1.4	ug/L	U	D	1.4		valid
73205	WL	8/28/2007	07081132	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
73205	WL	8/28/2007	07081132	000071-43-2	Benzene	N002	0.16	ug/L	U	D	0.16		valid
73205	WL	8/28/2007	07081132	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
73205	WL	8/28/2007	07081132	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	D	0.17		valid
73205	WL	8/28/2007	07081132	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
73205	WL	8/28/2007	07081132	000075-25-2	Bromoform	N002	0.19	ug/L	U	D	0.19		valid
73205	WL	8/28/2007	07081132	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
73205	WL	8/28/2007	07081132	000074-83-9	Bromomethane	N002	0.21	ug/L	U	D	0.21		valid
73205	WL	8/28/2007	07081132	07440-43-9	Cadmium	N001	0.79	ug/L	B	F	0.45		valid
73205	WL	8/28/2007	07081132	07440-43-9	Cadmium	N002	0.68	ug/L	B	D	0.45		valid
73205	WL	8/28/2007	07081132	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
73205	WL	8/28/2007	07081132	000056-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	D	0.19		valid
73205	WL	8/28/2007	07081132	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
73205	WL	8/28/2007	07081132	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	D	0.17		valid
73205	WL	8/28/2007	07081132	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
73205	WL	8/28/2007	07081132	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	D	0.17		valid
73205	WL	8/28/2007	07081132	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
73205	WL	8/28/2007	07081132	000067-66-3	Chloroform	N002	0.16	ug/L	U	D	0.16		valid
73205	WL	8/28/2007	07081132	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
73205	WL	8/28/2007	07081132	000074-87-3	Chloromethane	N002	0.3	ug/L	U	D	0.3		valid
73205	WL	8/28/2007	07081132	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
73205	WL	8/28/2007	07081132	000156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	D	0.15		valid
73205	WL	8/28/2007	07081132	07440-50-8	Copper	N001	4.5	ug/L	U	F	4.5		valid
73205	WL	8/28/2007	07081132	07440-50-8	Copper	N002	4.5	ug/L	U	D	4.5		valid
73205	WL	8/28/2007	07081132	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
73205	WL	8/28/2007	07081132	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	D	0.12		valid
73205	WL	8/28/2007	07081132	07439-92-1	Lead	N001	2.6	ug/L	U	F	2.6		valid
73205	WL	8/28/2007	07081132	07439-92-1	Lead	N002	2.6	ug/L	U	D	2.6		valid
73205	WL	8/28/2007	07081132	M&P XYLENE	m,p-Xylene	N001	0.34	ug/L	U	F	0.34		valid
73205	WL	8/28/2007	07081132	M&P XYLENE	m,p-Xylene	N002	0.34	ug/L	U	D	0.34		valid
73205	WL	8/28/2007	07081132	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
73205	WL	8/28/2007	07081132	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	D	0.32		valid
73205	WL	8/28/2007	07081132	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
73205	WL	8/28/2007	07081132	000091-20-3	Naphthalene	N002	0.22	ug/L	U	D	0.22		valid
73205	WL	8/28/2007	07081132	07440-02-0	Nickel	N001	7.8	ug/L	U	F	7.8		valid
73205	WL	8/28/2007	07081132	07440-02-0	Nickel	N002	7.8	ug/L	U	D	7.8		valid

Appendix A  
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LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE_ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE_TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
73205	WL	8/28/2007	07081132	000095-47-6	o-Xylene	N001	0.19	ug/L	U	F	0.19		valid
73205	WL	8/28/2007	07081132	000095-47-6	o-Xylene	N002	0.19	ug/L	U	D	0.19		valid
73205	WL	8/28/2007	07081132	07440-22-4	Silver	0001	2.8	ug/L	U	F	2.8		valid
73205	WL	8/28/2007	07081132	07440-22-4	Silver	0002	2.8	ug/L	U	D	2.8		valid
73205	WL	8/28/2007	07081132	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
73205	WL	8/28/2007	07081132	000100-42-5	Styrene	N002	0.17	ug/L	U	D	0.17		valid
73205	WL	8/28/2007	07081132	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
73205	WL	8/28/2007	07081132	000127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	D	0.2		valid
73205	WL	8/28/2007	07081132	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
73205	WL	8/28/2007	07081132	000108-88-3	Toluene	N002	0.17	ug/L	U	D	0.17		valid
73205	WL	8/28/2007	07081132	000100-41-4	Total Xylene	N001	0.16	ug/L	U	F	0.16		valid
73205	WL	8/28/2007	07081132	000100-41-4	Total Xylene	N002	0.16	ug/L	U	D	0.16		valid
73205	WL	8/28/2007	07081132	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
73205	WL	8/28/2007	07081132	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	D	0.15		valid
73205	WL	8/28/2007	07081132	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
73205	WL	8/28/2007	07081132	010061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	D	0.19		valid
73205	WL	8/28/2007	07081132	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
73205	WL	8/28/2007	07081132	000079-01-6	Trichloroethene	N002	0.16	ug/L	U	D	0.16		valid
73205	WL	8/28/2007	07081132	07440-61-1	Uranium	0001	120	ug/L		F	16		valid
73205	WL	8/28/2007	07081132	07440-61-1	Uranium	0002	140	ug/L		D	16		valid
73205	WL	8/28/2007	07081132	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
73205	WL	8/28/2007	07081132	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	D	0.17		valid
73205	WL	8/28/2007	07081132	07440-66-6	Zinc	0001	11	ug/L	B	F	4.5		U
73205	WL	8/28/2007	07081132	07440-66-6	Zinc	0002	10	ug/L	B	D	4.5		U
80005	WL	9/5/2007	07091151	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
80005	WL	9/5/2007	07091151	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
80005	WL	9/5/2007	07091151	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
80005	WL	9/5/2007	07091151	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
80005	WL	9/5/2007	07091151	000095-94-3	1,2,4,5-Tetrachlorobenzene	N001	2	ug/L	U	F	2		valid
80005	WL	9/5/2007	07091151	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
80005	WL	9/5/2007	07091151	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
80005	WL	9/5/2007	07091151	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
80005	WL	9/5/2007	07091151	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
80005	WL	9/5/2007	07091151	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
80005	WL	9/5/2007	07091151	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
80005	WL	9/5/2007	07091151	000122-66-7	1,2-Diphenylhydrazine	N001	0.33	ug/L	U	F	0.33		valid
80005	WL	9/5/2007	07091151	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
80005	WL	9/5/2007	07091151	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
80005	WL	9/5/2007	07091151	000105-67-9	2,4-Dimethylphenol	N001	0.57	ug/L	U	F	0.57		valid
80005	WL	9/5/2007	07091151	000095-95-4	2,4,5-Trichlorophenol	N001	0.39	ug/L	U	F	0.39		valid
80005	WL	9/5/2007	07091151	000088-06-2	2,4,6-Trichlorophenol	N001	0.37	ug/L	U	F	0.37		valid
80005	WL	9/5/2007	07091151	000120-83-2	2,4-Dichlorophenol	N001	1.3	ug/L	U	F	1.3		valid
80005	WL	9/5/2007	07091151	000051-28-5	2,4-Dinitrophenol	N001	20	ug/L	U	F	20		valid
80005	WL	9/5/2007	07091151	000121-14-2	2,4-Dinitrotoluene	N001	0.25	ug/L	U	F	0.25		valid
80005	WL	9/5/2007	07091151	000606-20-2	2,6-Dinitrotoluene	N001	0.23	ug/L	U	F	0.23		valid
80005	WL	9/5/2007	07091151	000091-58-7	2-Chloronaphthalene	N001	0.31	ug/L	U	F	0.31		valid
80005	WL	9/5/2007	07091151	000095-57-8	2-Chlorophenol	N001	0.38	ug/L	U	F	0.38		valid
80005	WL	9/5/2007	07091151	000091-94-1	3,3'-Dichlorobenzidine	N001	2	ug/L	U	F	2		valid
80005	WL	9/5/2007	07091151	000534-52-1	4,6-Dinitro-2-methyl phenol	N001	0.35	ug/L	U	F	0.35		valid
80005	WL	9/5/2007	07091151	000059-50-7	4-Chloro-3-methylphenol	N001	2	ug/L	U	F	2		valid
80005	WL	9/5/2007	07091151	000100-02-7	4-Nitrophenol	N001	1.7	ug/L	U	F	1.7		valid
80005	WL	9/5/2007	07091151	000083-32-9	Acenaphthene	N001	0.28	ug/L	U	F	0.28		valid
80005	WL	9/5/2007	07091151	000107-02-8	Acrolein	N001	2.8	ug/L	U	F	2.8		valid
80005	WL	9/5/2007	07091151	000107-13-1	Acrylonitrile	N001	1.4	ug/L	U	F	1.4		valid
80005	WL	9/5/2007	07091151	000120-12-7	Anthracene	N001	0.42	ug/L	U	F	0.42		valid
80005	WL	9/5/2007	07091151	000056-55-3	Benz(a)anthracene	N001	0.35	ug/L	U	F	0.35		valid
80005	WL	9/5/2007	07091151	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid

## Appendix A

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LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE_ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE_TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
80005	WL	9/5/2007	07091151	000092-87-5	Benzidine	N001	50	ug/L	U	F	50		valid
80005	WL	9/5/2007	07091151	000050-32-8	Benzo(a)pyrene	N001	0.74	ug/L	U	F	0.74		valid
80005	WL	9/5/2007	07091151	000205-99-2	Benzo(b)fluoranthene	N001	0.39	ug/L	U	F	0.39		valid
80005	WL	9/5/2007	07091151	000191-24-2	Benzo(g,h,i)Perylene	N001	0.5	ug/L	U	F	0.5		valid
80005	WL	9/5/2007	07091151	000207-08-9	Benzo(k)fluoranthene	N001	0.46	ug/L	U	F	0.46		valid
80005	WL	9/5/2007	07091151	000111-44-4	Bis(2-chloroethyl) ether	N001	0.41	ug/L	U	F	0.41		valid
80005	WL	9/5/2007	07091151	000108-60-1	Bis(2-chloroisopropyl) ether	N001	0.43	ug/L	U	F	0.43		valid
80005	WL	9/5/2007	07091151	000117-81-7	Bis(2-ethylhexyl) phthalate	N001	0.56	ug/L	U	F	0.56		valid
80005	WL	9/5/2007	07091151	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
80005	WL	9/5/2007	07091151	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
80005	WL	9/5/2007	07091151	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
80005	WL	9/5/2007	07091151	000085-68-7	Butyl benzyl phthalate	N001	1	ug/L	U	F	1		valid
80005	WL	9/5/2007	07091151	07440-43-9	Cadmium	N001	0.45	ug/L	U	F	0.45		valid
80005	WL	9/5/2007	07091151	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
80005	WL	9/5/2007	07091151	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
80005	WL	9/5/2007	07091151	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
80005	WL	9/5/2007	07091151	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
80005	WL	9/5/2007	07091151	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
80005	WL	9/5/2007	07091151	000218-01-9	Chrysene	N001	0.54	ug/L	U	F	0.54		valid
80005	WL	9/5/2007	07091151	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
80005	WL	9/5/2007	07091151	07440-50-8	Copper	N001	4.8	ug/L	B	F	4.5		valid
80005	WL	9/5/2007	07091151	000053-70-3	Dibenz(a,h)anthracene	N001	0.51	ug/L	U	F	0.51		valid
80005	WL	9/5/2007	07091151	000084-66-2	Diethyl phthalate	N001	0.38	ug/L	U	F	0.38		valid
80005	WL	9/5/2007	07091151	000131-11-3	Dimethyl phthalate	N001	1	ug/L	U	F	1		valid
80005	WL	9/5/2007	07091151	000084-74-2	Di-n-butyl phthalate	N001	1.2	ug/L	U	F	1.2		valid
80005	WL	9/5/2007	07091151	000206-44-0	Fluoranthene	N001	0.2	ug/L	U	F	0.2		valid
80005	WL	9/5/2007	07091151	000086-73-7	Fluorene	N001	0.31	ug/L	U	F	0.31		valid
80005	WL	9/5/2007	07091151	000118-74-1	Hexachlorobenzene	N001	0.66	ug/L	U	F	0.66		valid
80005	WL	9/5/2007	07091151	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
80005	WL	9/5/2007	07091151	000077-47-4	Hexachlorocyclopentadiene	N001	1.5	ug/L	U	F	1.5		valid
80005	WL	9/5/2007	07091151	000067-72-1	Hexachloroethane	N001	0.46	ug/L	U	F	0.46		valid
80005	WL	9/5/2007	07091151	000193-39-5	Indeno(1,2,3-cd)pyrene	N001	0.65	ug/L	U	F	0.65		valid
80005	WL	9/5/2007	07091151	000078-59-1	Isophorone	N001	0.21	ug/L	U	F	0.21		valid
80005	WL	9/5/2007	07091151	07439-92-1	Lead	N001	2.6	ug/L	U	F	2.6		valid
80005	WL	9/5/2007	07091151	m,p-Xylene	N001	0.34	ug/L	U	F	0.34		valid	
80005	WL	9/5/2007	07091151	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
80005	WL	9/5/2007	07091151	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
80005	WL	9/5/2007	07091151	07440-02-0	Nickel	N001	7.8	ug/L	U	F	7.8		valid
80005	WL	9/5/2007	07091151	000098-95-3	Nitrobenzene	N001	0.81	ug/L	U	F	0.81		valid
80005	WL	9/5/2007	07091151	000924-16-3	N-Nitrosodibutylamine	N001	2	ug/L	U	F	2		valid
80005	WL	9/5/2007	07091151	000055-18-5	N-Nitrosodiethylamine	N001	1.1	ug/L	U	F	1.1		valid
80005	WL	9/5/2007	07091151	000062-75-9	N-Nitrosodimethylamine	N001	0.29	ug/L	U	F	0.29		valid
80005	WL	9/5/2007	07091151	000621-64-7	N-Nitrosodi-n-propylamine	N001	0.35	ug/L	U	F	0.35		valid
80005	WL	9/5/2007	07091151	000086-30-6	N-Nitrosodiphenylamine	N001	0.44	ug/L	U	F	0.44		valid
80005	WL	9/5/2007	07091151	000930-55-2	N-Nitrosopyrrolidine	N001	0.8	ug/L	U	F	0.8		valid
80005	WL	9/5/2007	07091151	000095-47-6	o-Xylene	N001	0.19	ug/L	U	F	0.19		valid
80005	WL	9/5/2007	07091151	000056-38-2	Parathion, ethyl	N001	2	ug/L	U	F	2		valid
80005	WL	9/5/2007	07091151	000608-93-5	Pentachlorobenzene	N001	2	ug/L	U	F	2		valid
80005	WL	9/5/2007	07091151	000087-86-5	Pentachlorophenol	N001	20	ug/L	U	F	20		valid
80005	WL	9/5/2007	07091151	000108-95-2	Phenol	N001	0.31	ug/L	U	F	0.31		valid
80005	WL	9/5/2007	07091151	000129-00-0	Pyrene	N001	0.37	ug/L	U	F	0.37		valid
80005	WL	9/5/2007	07091151	07440-22-4	Silver	N001	2.8	ug/L	U	F	2.8		valid
80005	WL	9/5/2007	07091151	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
80005	WL	9/5/2007	07091151	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
80005	WL	9/5/2007	07091151	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
80005	WL	9/5/2007	07091151	000100-41-4	Total Xylene	N001	0.16	ug/L	U	F	0.16		valid
80005	WL	9/5/2007	07091151	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid

## Appendix A

Analytical Results for Water Samples - Third Quarter of CY 2007

LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
80005	WL	9/5/2007	07091151	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
80005	WL	9/5/2007	07091151	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
80005	WL	9/5/2007	07091151	07440-61-1	Uranium	0001	16	ug/L	U	F	16		valid
80005	WL	9/5/2007	07091151	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
80005	WL	9/5/2007	07091151	07440-66-6	Zinc	0001	14	ug/L	B	F	4.5	U	
80105	WL	9/5/2007	07091151	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
80105	WL	9/5/2007	07091151	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
80105	WL	9/5/2007	07091151	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
80105	WL	9/5/2007	07091151	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
80105	WL	9/5/2007	07091151	000095-94-3	1,2,4,5-Tetrachlorobenzene	N001	2	ug/L	U	F	2		valid
80105	WL	9/5/2007	07091151	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
80105	WL	9/5/2007	07091151	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
80105	WL	9/5/2007	07091151	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
80105	WL	9/5/2007	07091151	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
80105	WL	9/5/2007	07091151	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
80105	WL	9/5/2007	07091151	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
80105	WL	9/5/2007	07091151	000122-66-7	1,2-Diphenylhydrazine	N001	0.33	ug/L	U	F	0.33		valid
80105	WL	9/5/2007	07091151	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
80105	WL	9/5/2007	07091151	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
80105	WL	9/5/2007	07091151	000105-67-9	2, 4-Dimethylphenol	N001	0.57	ug/L	U	F	0.57		valid
80105	WL	9/5/2007	07091151	000095-95-4	2,4,5-Trichlorophenol	N001	0.39	ug/L	U	F	0.39		valid
80105	WL	9/5/2007	07091151	000088-06-2	2,4,6-Trichlorophenol	N001	0.37	ug/L	U	F	0.37		valid
80105	WL	9/5/2007	07091151	000120-83-2	2,4-Dichlorophenol	N001	1.3	ug/L	U	F	1.3		valid
80105	WL	9/5/2007	07091151	000051-28-5	2,4-Dinitrophenol	N001	20	ug/L	U	F	20		valid
80105	WL	9/5/2007	07091151	000121-14-2	2,4-Dinitrotoluene	N001	0.25	ug/L	U	F	0.25		valid
80105	WL	9/5/2007	07091151	000606-20-2	2,6-Dinitrotoluene	N001	0.23	ug/L	U	F	0.23		valid
80105	WL	9/5/2007	07091151	000091-58-7	2-Chloronaphthalene	N001	0.31	ug/L	U	F	0.31		valid
80105	WL	9/5/2007	07091151	000095-57-8	2-Chlorophenol	N001	0.38	ug/L	U	F	0.38		valid
80105	WL	9/5/2007	07091151	000091-94-1	3,3'-Dichlorobenzidine	N001	2	ug/L	U	F	2		valid
80105	WL	9/5/2007	07091151	000534-52-1	4,6-Dinitro-2-methyl phenol	N001	0.35	ug/L	U	F	0.35		valid
80105	WL	9/5/2007	07091151	000059-50-7	4-Chloro-3-methylphenol	N001	2	ug/L	U	F	2		valid
80105	WL	9/5/2007	07091151	000100-02-7	4-Nitrophenol	N001	1.7	ug/L	U	F	1.7		valid
80105	WL	9/5/2007	07091151	000083-32-9	Acenaphthene	N001	0.28	ug/L	U	F	0.28		valid
80105	WL	9/5/2007	07091151	000107-02-8	Acrolein	N001	2.8	ug/L	U	F	2.8		valid
80105	WL	9/5/2007	07091151	000107-13-1	Acrylonitrile	N001	1.4	ug/L	U	F	1.4		valid
80105	WL	9/5/2007	07091151	000120-12-7	Anthracene	N001	0.42	ug/L	U	F	0.42		valid
80105	WL	9/5/2007	07091151	000056-55-3	Benz(a)anthracene	N001	0.35	ug/L	U	F	0.35		valid
80105	WL	9/5/2007	07091151	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
80105	WL	9/5/2007	07091151	000092-87-5	Benzidine	N001	50	ug/L	U	F	50		valid
80105	WL	9/5/2007	07091151	000050-32-8	Benzo(a)pyrene	N001	0.74	ug/L	U	F	0.74		valid
80105	WL	9/5/2007	07091151	000205-99-2	Benzo(b)fluoranthene	N001	0.39	ug/L	U	F	0.39		valid
80105	WL	9/5/2007	07091151	000191-24-2	Benzo(g,h,i)Perylene	N001	0.5	ug/L	U	F	0.5		valid
80105	WL	9/5/2007	07091151	000207-08-9	Benzo(k)fluoranthene	N001	0.46	ug/L	U	F	0.46		valid
80105	WL	9/5/2007	07091151	000111-44-4	Bis(2-chloroethyl) ether	N001	0.41	ug/L	U	F	0.41		valid
80105	WL	9/5/2007	07091151	000108-60-1	Bis(2-chloroisopropyl) ether	N001	0.43	ug/L	U	F	0.43		valid
80105	WL	9/5/2007	07091151	000117-81-7	Bis(2-ethylhexyl) phthalate	N001	0.56	ug/L	U	F	0.56		valid
80105	WL	9/5/2007	07091151	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
80105	WL	9/5/2007	07091151	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
80105	WL	9/5/2007	07091151	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
80105	WL	9/5/2007	07091151	000085-68-7	Butyl benzyl phthalate	N001	1	ug/L	U	F	1		valid
80105	WL	9/5/2007	07091151	07440-43-9	Cadmium	0001	0.45	ug/L	U	F	0.45		valid
80105	WL	9/5/2007	07091151	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
80105	WL	9/5/2007	07091151	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
80105	WL	9/5/2007	07091151	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
80105	WL	9/5/2007	07091151	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
80105	WL	9/5/2007	07091151	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
80105	WL	9/5/2007	07091151	000218-01-9	Chrysene	N001	0.54	ug/L	U	F	0.54		valid

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LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
80105	WL	9/5/2007	07091151	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
80105	WL	9/5/2007	07091151	07440-50-8	Copper	0001	4.5	ug/L	U	F	4.5		valid
80105	WL	9/5/2007	07091151	000053-70-3	Dibenz(a,h)anthracene	N001	0.51	ug/L	U	F	0.51		valid
80105	WL	9/5/2007	07091151	000084-66-2	Diethyl phthalate	N001	0.38	ug/L	U	F	0.38		valid
80105	WL	9/5/2007	07091151	000131-11-3	Dimethyl phthalate	N001	1	ug/L	U	F	1		valid
80105	WL	9/5/2007	07091151	000084-74-2	Di-n-butyl phthalate	N001	1.2	ug/L	U	F	1.2		valid
80105	WL	9/5/2007	07091151	000206-44-0	Fluoranthene	N001	0.2	ug/L	U	F	0.2		valid
80105	WL	9/5/2007	07091151	000086-73-7	Fluorene	N001	0.31	ug/L	U	F	0.31		valid
80105	WL	9/5/2007	07091151	000118-74-1	Hexachlorobenzene	N001	0.66	ug/L	U	F	0.66		valid
80105	WL	9/5/2007	07091151	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
80105	WL	9/5/2007	07091151	000077-47-4	Hexachlorocyclopentadiene	N001	1.5	ug/L	U	F	1.5		valid
80105	WL	9/5/2007	07091151	000067-72-1	Hexachloroethane	N001	0.46	ug/L	U	F	0.46		valid
80105	WL	9/5/2007	07091151	000193-39-5	Indeno(1,2,3-cd)pyrene	N001	0.65	ug/L	U	F	0.65		valid
80105	WL	9/5/2007	07091151	000078-59-1	Isophorone	N001	0.21	ug/L	U	F	0.21		valid
80105	WL	9/5/2007	07091151	07439-92-1	Lead	0001	2.6	ug/L	U	F	2.6		valid
80105	WL	9/5/2007	07091151	M&P XYLENE	m,p-Xylene	N001	0.34	ug/L	U	F	0.34		valid
80105	WL	9/5/2007	07091151	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
80105	WL	9/5/2007	07091151	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
80105	WL	9/5/2007	07091151	07440-02-0	Nickel	0001	7.8	ug/L	U	F	7.8		valid
80105	WL	9/5/2007	07091151	000098-95-3	Nitrobenzene	N001	0.81	ug/L	U	F	0.81		valid
80105	WL	9/5/2007	07091151	000924-16-3	N-Nitrosodibutylamine	N001	2	ug/L	U	F	2		valid
80105	WL	9/5/2007	07091151	000055-18-5	N-Nitrosodiethylamine	N001	1.1	ug/L	U	F	1.1		valid
80105	WL	9/5/2007	07091151	000062-75-9	N-Nitrosodimethylamine	N001	0.29	ug/L	U	F	0.29		valid
80105	WL	9/5/2007	07091151	000621-64-7	N-Nitrosodi-n-propylamine	N001	0.35	ug/L	U	F	0.35		valid
80105	WL	9/5/2007	07091151	000086-30-6	N-Nitrosodiphenylamine	N001	0.44	ug/L	U	F	0.44		valid
80105	WL	9/5/2007	07091151	000930-55-2	N-Nitrosopyrrolidine	N001	0.8	ug/L	U	F	0.8		valid
80105	WL	9/5/2007	07091151	000095-47-6	o-Xylene	N001	0.19	ug/L	U	F	0.19		valid
80105	WL	9/5/2007	07091151	000056-38-2	Parathion, ethyl	N001	2	ug/L	U	F	2		valid
80105	WL	9/5/2007	07091151	000608-93-5	Pentachlorobenzene	N001	2	ug/L	U	F	2		valid
80105	WL	9/5/2007	07091151	000087-86-5	Pentachlorophenol	N001	20	ug/L	U	F	20		valid
80105	WL	9/5/2007	07091151	000108-95-2	Phenol	N001	0.31	ug/L	U	F	0.31		valid
80105	WL	9/5/2007	07091151	000129-00-0	Pyrene	N001	0.37	ug/L	U	F	0.37		valid
80105	WL	9/5/2007	07091151	07440-22-4	Silver	0001	2.8	ug/L	U	F	2.8		valid
80105	WL	9/5/2007	07091151	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
80105	WL	9/5/2007	07091151	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
80105	WL	9/5/2007	07091151	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
80105	WL	9/5/2007	07091151	000100-41-4	Total Xylene	N001	0.16	ug/L	U	F	0.16		valid
80105	WL	9/5/2007	07091151	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
80105	WL	9/5/2007	07091151	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
80105	WL	9/5/2007	07091151	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
80105	WL	9/5/2007	07091151	07440-61-1	Uranium	0001	16	ug/L	U	F	16		valid
80105	WL	9/5/2007	07091151	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
80105	WL	9/5/2007	07091151	07440-66-6	Zinc	0001	7.2	ug/L	B	F	4.5		U
80205	WL	9/7/2007	07091157	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
80205	WL	9/7/2007	07091157	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	D	0.16		valid
80205	WL	9/7/2007	07091157	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
80205	WL	9/7/2007	07091157	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	D	0.2		valid
80205	WL	9/7/2007	07091157	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
80205	WL	9/7/2007	07091157	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	D	0.32		valid
80205	WL	9/7/2007	07091157	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
80205	WL	9/7/2007	07091157	000075-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	D	0.14		valid
80205	WL	9/7/2007	07091157	000095-94-3	1,2,4,5-Tetrachlorobenzene	N001	2	ug/L	U	F	2		valid
80205	WL	9/7/2007	07091157	000095-94-3	1,2,4,5-Tetrachlorobenzene	N002	2	ug/L	U	D	2		valid
80205	WL	9/7/2007	07091157	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
80205	WL	9/7/2007	07091157	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	D	0.32		valid
80205	WL	9/7/2007	07091157	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
80205	WL	9/7/2007	07091157	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	D	1.5		valid

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LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE_ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE_TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
80205	WL	9/7/2007	07091157	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
80205	WL	9/7/2007	07091157	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	D	0.18		valid
80205	WL	9/7/2007	07091157	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
80205	WL	9/7/2007	07091157	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	D	0.13		valid
80205	WL	9/7/2007	07091157	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
80205	WL	9/7/2007	07091157	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	D	0.13		valid
80205	WL	9/7/2007	07091157	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
80205	WL	9/7/2007	07091157	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	D	0.13		valid
80205	WL	9/7/2007	07091157	000122-66-7	1,2-Diphenylhydrazine	N001	0.33	ug/L	U	F	0.33		valid
80205	WL	9/7/2007	07091157	000122-66-7	1,2-Diphenylhydrazine	N002	0.33	ug/L	U	D	0.33		valid
80205	WL	9/7/2007	07091157	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
80205	WL	9/7/2007	07091157	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		valid
80205	WL	9/7/2007	07091157	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
80205	WL	9/7/2007	07091157	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		valid
80205	WL	9/7/2007	07091157	000105-67-9	2, 4-Dimethylphenol	N001	0.57	ug/L	U	F	0.57		valid
80205	WL	9/7/2007	07091157	000105-67-9	2, 4-Dimethylphenol	N002	0.57	ug/L	U	D	0.57		valid
80205	WL	9/7/2007	07091157	000095-95-4	2,4,5-Trichlorophenol	N001	0.39	ug/L	U	F	0.39		valid
80205	WL	9/7/2007	07091157	000095-95-4	2,4,5-Trichlorophenol	N002	0.39	ug/L	U	D	0.39		valid
80205	WL	9/7/2007	07091157	000088-06-2	2,4,6-Trichlorophenol	N001	0.37	ug/L	U	F	0.37		valid
80205	WL	9/7/2007	07091157	000088-06-2	2,4,6-Trichlorophenol	N002	0.37	ug/L	U	D	0.37		valid
80205	WL	9/7/2007	07091157	000120-83-2	2,4-Dichlorophenol	N001	1.3	ug/L	U	F	1.3		valid
80205	WL	9/7/2007	07091157	000120-83-2	2,4-Dichlorophenol	N002	1.3	ug/L	U	D	1.3		valid
80205	WL	9/7/2007	07091157	000051-28-5	2,4-Dinitrophenol	N001	20	ug/L	U	F	20		valid
80205	WL	9/7/2007	07091157	000051-28-5	2,4-Dinitrophenol	N002	20	ug/L	U	D	20		valid
80205	WL	9/7/2007	07091157	000121-14-2	2,4-Dinitrotoluene	N001	0.25	ug/L	U	F	0.25		valid
80205	WL	9/7/2007	07091157	000121-14-2	2,4-Dinitrotoluene	N002	0.25	ug/L	U	D	0.25		valid
80205	WL	9/7/2007	07091157	000606-20-2	2,6-Dinitrotoluene	N001	0.23	ug/L	U	F	0.23		valid
80205	WL	9/7/2007	07091157	000606-20-2	2,6-Dinitrotoluene	N002	0.23	ug/L	U	D	0.23		valid
80205	WL	9/7/2007	07091157	000091-58-7	2-Chloronaphthalene	N001	0.31	ug/L	U	F	0.31		valid
80205	WL	9/7/2007	07091157	000091-58-7	2-Chloronaphthalene	N002	0.31	ug/L	U	D	0.31		valid
80205	WL	9/7/2007	07091157	000095-57-8	2-Chlorophenol	N001	0.38	ug/L	U	F	0.38		valid
80205	WL	9/7/2007	07091157	000095-57-8	2-Chlorophenol	N002	0.38	ug/L	U	D	0.38		valid
80205	WL	9/7/2007	07091157	000091-94-1	3,3'-Dichlorobenzidine	N001	2	ug/L	U	F	2		valid
80205	WL	9/7/2007	07091157	000091-94-1	3,3'-Dichlorobenzidine	N002	2	ug/L	U	D	2		valid
80205	WL	9/7/2007	07091157	000534-52-1	4,6-Dinitro-2-methyl phenol	N001	0.35	ug/L	U	F	0.35		valid
80205	WL	9/7/2007	07091157	000534-52-1	4,6-Dinitro-2-methyl phenol	N002	0.35	ug/L	U	D	0.35		valid
80205	WL	9/7/2007	07091157	000059-50-7	4-Chloro-3-methylphenol	N001	2	ug/L	U	F	2		valid
80205	WL	9/7/2007	07091157	000059-50-7	4-Chloro-3-methylphenol	N002	2	ug/L	U	D	2		valid
80205	WL	9/7/2007	07091157	000100-02-7	4-Nitrophenol	N001	1.7	ug/L	U	F	1.7		valid
80205	WL	9/7/2007	07091157	000100-02-7	4-Nitrophenol	N002	1.7	ug/L	U	D	1.7		valid
80205	WL	9/7/2007	07091157	000083-32-9	Acenaphthene	N001	0.28	ug/L	U	F	0.28		valid
80205	WL	9/7/2007	07091157	000083-32-9	Acenaphthene	N002	0.28	ug/L	U	D	0.28		valid
80205	WL	9/7/2007	07091157	000107-02-8	Acrolein	N001	2.8	ug/L	U	F	2.8		valid
80205	WL	9/7/2007	07091157	000107-02-8	Acrolein	N002	2.8	ug/L	U	D	2.8		valid
80205	WL	9/7/2007	07091157	000107-13-1	Acrylonitrile	N001	1.4	ug/L	U	F	1.4		valid
80205	WL	9/7/2007	07091157	000107-13-1	Acrylonitrile	N002	1.4	ug/L	U	D	1.4		valid
80205	WL	9/7/2007	07091157	000120-12-7	Anthracene	N001	0.42	ug/L	U	F	0.42		valid
80205	WL	9/7/2007	07091157	000120-12-7	Anthracene	N002	0.42	ug/L	U	D	0.42		valid
80205	WL	9/7/2007	07091157	000056-55-3	Benz(a)anthracene	N001	0.35	ug/L	U	F	0.35		valid
80205	WL	9/7/2007	07091157	000056-55-3	Benz(a)anthracene	N002	0.35	ug/L	U	D	0.35		valid
80205	WL	9/7/2007	07091157	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
80205	WL	9/7/2007	07091157	000071-43-2	Benzene	N002	0.16	ug/L	U	D	0.16		valid
80205	WL	9/7/2007	07091157	000092-87-5	Benzidine	N001	50	ug/L	U	F	50		valid
80205	WL	9/7/2007	07091157	000092-87-5	Benzidine	N002	50	ug/L	U	D	50		valid
80205	WL	9/7/2007	07091157	000050-32-8	Benzo(a)pyrene	N001	0.74	ug/L	U	F	0.74		valid
80205	WL	9/7/2007	07091157	000050-32-8	Benzo(a)pyrene	N002	0.74	ug/L	U	D	0.74		valid
80205	WL	9/7/2007	07091157	000205-99-2	Benzo(b)fluoranthene	N001	0.39	ug/L	U	F	0.39		valid

## Appendix A

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LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE_ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE_TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
80205	WL	9/7/2007	07091157	000205-99-2	Benzo(b)fluoranthene	N002	0.39	ug/L	U	D	0.39		valid
80205	WL	9/7/2007	07091157	000191-24-2	Benzo(g,h,i)Perylene	N001	0.5	ug/L	U	F	0.5		valid
80205	WL	9/7/2007	07091157	000191-24-2	Benzo(g,h,i)Perylene	N002	0.5	ug/L	U	D	0.5		valid
80205	WL	9/7/2007	07091157	000207-08-9	Benzo(k)fluoranthene	N001	0.46	ug/L	U	F	0.46		valid
80205	WL	9/7/2007	07091157	000207-08-9	Benzo(k)fluoranthene	N002	0.46	ug/L	U	D	0.46		valid
80205	WL	9/7/2007	07091157	000111-44-4	Bis(2-chloroethyl) ether	N001	0.41	ug/L	U	F	0.41		valid
80205	WL	9/7/2007	07091157	000111-44-4	Bis(2-chloroethyl) ether	N002	0.41	ug/L	U	D	0.41		valid
80205	WL	9/7/2007	07091157	000108-60-1	Bis(2-chloroisopropyl) ether	N001	0.43	ug/L	U	F	0.43		valid
80205	WL	9/7/2007	07091157	000108-60-1	Bis(2-chloroisopropyl) ether	N002	0.43	ug/L	U	D	0.43		valid
80205	WL	9/7/2007	07091157	000117-81-7	Bis(2-ethylhexyl) phthalate	N001	0.56	ug/L	U	F	0.56		valid
80205	WL	9/7/2007	07091157	000117-81-7	Bis(2-ethylhexyl) phthalate	N002	0.56	ug/L	U	D	0.56		valid
80205	WL	9/7/2007	07091157	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
80205	WL	9/7/2007	07091157	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	D	0.17		valid
80205	WL	9/7/2007	07091157	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
80205	WL	9/7/2007	07091157	000075-25-2	Bromoform	N002	0.19	ug/L	U	D	0.19		valid
80205	WL	9/7/2007	07091157	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
80205	WL	9/7/2007	07091157	000074-83-9	Bromomethane	N002	0.21	ug/L	U	D	0.21		valid
80205	WL	9/7/2007	07091157	000085-68-7	Butyl benzyl phthalate	N001	1	ug/L	U	F	1		valid
80205	WL	9/7/2007	07091157	000085-68-7	Butyl benzyl phthalate	N002	1	ug/L	U	D	1		valid
80205	WL	9/7/2007	07091157	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
80205	WL	9/7/2007	07091157	000056-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	D	0.19		valid
80205	WL	9/7/2007	07091157	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
80205	WL	9/7/2007	07091157	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	D	0.17		valid
80205	WL	9/7/2007	07091157	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
80205	WL	9/7/2007	07091157	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	D	0.17		valid
80205	WL	9/7/2007	07091157	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
80205	WL	9/7/2007	07091157	000067-66-3	Chloroform	N002	0.16	ug/L	U	D	0.16		valid
80205	WL	9/7/2007	07091157	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
80205	WL	9/7/2007	07091157	000074-87-3	Chloromethane	N002	0.3	ug/L	U	D	0.3		valid
80205	WL	9/7/2007	07091157	000218-01-9	Chrysene	N001	0.54	ug/L	U	F	0.54		valid
80205	WL	9/7/2007	07091157	000218-01-9	Chrysene	N002	0.54	ug/L	U	D	0.54		valid
80205	WL	9/7/2007	07091157	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
80205	WL	9/7/2007	07091157	000156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	D	0.15		valid
80205	WL	9/7/2007	07091157	000053-70-3	Dibenz(a,h)anthracene	N001	0.51	ug/L	U	F	0.51		valid
80205	WL	9/7/2007	07091157	000053-70-3	Dibenz(a,h)anthracene	N002	0.51	ug/L	U	D	0.51		valid
80205	WL	9/7/2007	07091157	000084-66-2	Diethyl phthalate	N001	0.38	ug/L	U	F	0.38		valid
80205	WL	9/7/2007	07091157	000084-66-2	Diethyl phthalate	N002	0.38	ug/L	U	D	0.38		valid
80205	WL	9/7/2007	07091157	000131-11-3	Dimethyl phthalate	N001	1	ug/L	U	F	1		valid
80205	WL	9/7/2007	07091157	000131-11-3	Dimethyl phthalate	N002	1	ug/L	U	D	1		valid
80205	WL	9/7/2007	07091157	000084-74-2	Di-n-butyl phthalate	N001	1.2	ug/L	U	F	1.2		valid
80205	WL	9/7/2007	07091157	000084-74-2	Di-n-butyl phthalate	N002	1.2	ug/L	U	D	1.2		valid
80205	WL	9/7/2007	07091157	000206-44-0	Fluoranthene	N001	0.2	ug/L	U	F	0.2		valid
80205	WL	9/7/2007	07091157	000206-44-0	Fluoranthene	N002	0.2	ug/L	U	D	0.2		valid
80205	WL	9/7/2007	07091157	000086-73-7	Fluorene	N001	0.31	ug/L	U	F	0.31		valid
80205	WL	9/7/2007	07091157	000086-73-7	Fluorene	N002	0.31	ug/L	U	D	0.31		valid
80205	WL	9/7/2007	07091157	000118-74-1	Hexachlorobenzene	N001	0.66	ug/L	U	F	0.66		valid
80205	WL	9/7/2007	07091157	000118-74-1	Hexachlorobenzene	N002	0.66	ug/L	U	D	0.66		valid
80205	WL	9/7/2007	07091157	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
80205	WL	9/7/2007	07091157	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	D	0.12		valid
80205	WL	9/7/2007	07091157	000077-47-4	Hexachlorocyclopentadiene	N001	1.5	ug/L	U	F	1.5		valid
80205	WL	9/7/2007	07091157	000077-47-4	Hexachlorocyclopentadiene	N002	1.5	ug/L	U	D	1.5		valid
80205	WL	9/7/2007	07091157	000067-72-1	Hexachloroethane	N001	0.46	ug/L	U	F	0.46		valid
80205	WL	9/7/2007	07091157	000193-39-5	Indeno(1,2,3-cd)pyrene	N001	0.65	ug/L	U	F	0.65		valid
80205	WL	9/7/2007	07091157	000193-39-5	Indeno(1,2,3-cd)pyrene	N002	0.65	ug/L	U	D	0.65		valid
80205	WL	9/7/2007	07091157	000078-59-1	Isophorone	N001	0.21	ug/L	U	F	0.21		valid
80205	WL	9/7/2007	07091157	000078-59-1	Isophorone	N002	0.21	ug/L	U	D	0.21		valid

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LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
80205	WL	9/7/2007	07091157	M&P XYLENE	m,p-Xylene	N001	0.34	ug/L	U	F	0.34		valid
80205	WL	9/7/2007	07091157	M&P XYLENE	m,p-Xylene	N002	0.34	ug/L	U	D	0.34		valid
80205	WL	9/7/2007	07091157	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
80205	WL	9/7/2007	07091157	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	D	0.32		valid
80205	WL	9/7/2007	07091157	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
80205	WL	9/7/2007	07091157	000091-20-3	Naphthalene	N002	0.22	ug/L	U	D	0.22		valid
80205	WL	9/7/2007	07091157	000098-95-3	Nitrobenzene	N001	0.81	ug/L	U	F	0.81		valid
80205	WL	9/7/2007	07091157	000098-95-3	Nitrobenzene	N002	0.81	ug/L	U	D	0.81		valid
80205	WL	9/7/2007	07091157	000924-16-3	N-Nitrosodibutylamine	N001	2	ug/L	U	F	2		valid
80205	WL	9/7/2007	07091157	000924-16-3	N-Nitrosodibutylamine	N002	2	ug/L	U	D	2		valid
80205	WL	9/7/2007	07091157	000055-18-5	N-Nitrosodiethylamine	N001	1.1	ug/L	U	F	1.1		valid
80205	WL	9/7/2007	07091157	000055-18-5	N-Nitrosodiethylamine	N002	1.1	ug/L	U	D	1.1		valid
80205	WL	9/7/2007	07091157	000062-75-9	N-Nitrosodimethylamine	N001	0.29	ug/L	U	F	0.29		valid
80205	WL	9/7/2007	07091157	000062-75-9	N-Nitrosodimethylamine	N002	0.29	ug/L	U	D	0.29		valid
80205	WL	9/7/2007	07091157	000621-64-7	N-Nitrosod-n-propylamine	N001	0.35	ug/L	U	F	0.35		valid
80205	WL	9/7/2007	07091157	000621-64-7	N-Nitrosod-n-propylamine	N002	0.35	ug/L	U	D	0.35		valid
80205	WL	9/7/2007	07091157	000086-30-6	N-Nitrosodiphenylamine	N001	0.44	ug/L	U	F	0.44		valid
80205	WL	9/7/2007	07091157	000086-30-6	N-Nitrosodiphenylamine	N002	0.44	ug/L	U	D	0.44		valid
80205	WL	9/7/2007	07091157	000930-55-2	N-Nitrosopyrrolidine	N001	0.8	ug/L	U	F	0.8		valid
80205	WL	9/7/2007	07091157	000930-55-2	N-Nitrosopyrrolidine	N002	0.8	ug/L	U	D	0.8		valid
80205	WL	9/7/2007	07091157	000095-47-6	o-Xylene	N001	0.19	ug/L	U	F	0.19		valid
80205	WL	9/7/2007	07091157	000095-47-6	o-Xylene	N002	0.19	ug/L	U	D	0.19		valid
80205	WL	9/7/2007	07091157	000056-38-2	Parathion, ethyl	N001	2	ug/L	U	F	2		valid
80205	WL	9/7/2007	07091157	000056-38-2	Parathion, ethyl	N002	2	ug/L	U	D	2		valid
80205	WL	9/7/2007	07091157	000608-93-5	Pentachlorobenzene	N001	2	ug/L	U	F	2		valid
80205	WL	9/7/2007	07091157	000608-93-5	Pentachlorobenzene	N002	2	ug/L	U	D	2		valid
80205	WL	9/7/2007	07091157	000087-86-5	Pentachlorophenol	N001	20	ug/L	U	F	20		valid
80205	WL	9/7/2007	07091157	000087-86-5	Pentachlorophenol	N002	20	ug/L	U	D	20		valid
80205	WL	9/7/2007	07091157	000108-95-2	Phenol	N001	0.31	ug/L	U	F	0.31		valid
80205	WL	9/7/2007	07091157	000108-95-2	Phenol	N002	0.31	ug/L	U	D	0.31		valid
80205	WL	9/7/2007	07091157	000129-00-0	Pyrene	N001	0.37	ug/L	U	F	0.37		valid
80205	WL	9/7/2007	07091157	000129-00-0	Pyrene	N002	0.37	ug/L	U	D	0.37		valid
80205	WL	9/7/2007	07091157	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
80205	WL	9/7/2007	07091157	000100-42-5	Styrene	N002	0.17	ug/L	U	D	0.17		valid
80205	WL	9/7/2007	07091157	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
80205	WL	9/7/2007	07091157	000127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	D	0.2		valid
80205	WL	9/7/2007	07091157	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
80205	WL	9/7/2007	07091157	000108-88-3	Toluene	N002	0.17	ug/L	U	D	0.17		valid
80205	WL	9/7/2007	07091157	000100-41-4	Total Xylene	N001	0.16	ug/L	U	F	0.16		valid
80205	WL	9/7/2007	07091157	000100-41-4	Total Xylene	N002	0.16	ug/L	U	D	0.16		valid
80205	WL	9/7/2007	07091157	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
80205	WL	9/7/2007	07091157	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	D	0.15		valid
80205	WL	9/7/2007	07091157	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
80205	WL	9/7/2007	07091157	010061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	D	0.19		valid
80205	WL	9/7/2007	07091157	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
80205	WL	9/7/2007	07091157	000079-01-6	Trichloroethene	N002	0.16	ug/L	U	D	0.16		valid
80205	WL	9/7/2007	07091157	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
80205	WL	9/7/2007	07091157	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	D	0.17		valid
A4 POND	SL	9/12/2007	07091165	NH3+NH4-N	Ammonia Total as N	N001	0.03	mg/L	U	F	0.03		J
A4 POND	SL	9/12/2007	07091165	RA-228	Radium-228	N001	1.81	pCi/L		F	0.573	0.614	valid
A4 POND	SL	9/12/2007	07091165	00057-12-5	Total Cyanide	N001	0.0015	mg/L	U	F	0.0015		J
A4SED	SL	7/13/2007	07081106	NH3+NH4-N	Ammonia Total as N	N001	229	mg/kg	H	F	5.38		J
A4SED	SL	7/13/2007	07081106	RA-228	Radium-228	N001	1.53	pCi/g		F	0.156	0.295	valid
B5 POND	SL	9/12/2007	07091165	NH3+NH4-N	Ammonia Total as N	N001	0.03	mg/L	U	F	0.03		J
B5 POND	SL	9/12/2007	07091165	RA-228	Radium-228	N001	0.0613	pCi/L	U	F	0.382	0.223	valid
B5 POND	SL	9/12/2007	07091165	00057-12-5	Total Cyanide	N001	0.0015	mg/L	U	F	0.0015		J

## Appendix A

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LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
B5SED	SL	7/13/2007	07081106	NH3+NH4-N	Ammonia Total as N	N001	434	mg/kg	H	F	5.19	J	
B5SED	SL	7/13/2007	07081106	RA-228	Radium-228	N001	0	pCi/g	UJ	F	0.696	0.45	valid
B5SED	SL	7/13/2007	07081106	00057-12-5	Total Cyanide	N001	0.353	mg/kg	HJ	F	0.243	J	
C2 POND	SL	9/12/2007	07091165	NH3+NH4-N	Ammonia Total as N	N001	0.03	mg/L	U	F	0.03	J	
C2 POND	SL	9/12/2007	07091165	RA-228	Radium-228	N001	1.34	pCi/L		F	0.48	0.466	valid
C2 POND	SL	9/12/2007	07091165	00057-12-5	Total Cyanide	N001	0.0015	mg/L	U	F	0.0015	J	
C2SED	SL	7/13/2007	07081106	NH3+NH4-N	Ammonia Total as N	N001	116	mg/kg	H	F	3.37	J	
C2SED	SL	7/13/2007	07081106	RA-228	Radium-228	N001	1.59	pCi/g		F	0.281	0.399	valid
C2SED	SL	7/13/2007	07081106	00057-12-5	Total Cyanide	N001	0.159	mg/kg	HU	F	0.159	J	
ET EFFLUENT	TS	8/16/2007	07081113	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
ET EFFLUENT	TS	8/16/2007	07081113	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
ET EFFLUENT	TS	8/16/2007	07081113	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
ET EFFLUENT	TS	8/16/2007	07081113	000075-35-4	1,1-Dichloroethene	N001	0.22	ug/L	J	F	0.14		valid
ET EFFLUENT	TS	8/16/2007	07081113	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
ET EFFLUENT	TS	8/16/2007	07081113	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
ET EFFLUENT	TS	8/16/2007	07081113	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
ET EFFLUENT	TS	8/16/2007	07081113	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
ET EFFLUENT	TS	8/16/2007	07081113	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
ET EFFLUENT	TS	8/16/2007	07081113	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
ET EFFLUENT	TS	8/16/2007	07081113	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
ET EFFLUENT	TS	8/16/2007	07081113	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
ET EFFLUENT	TS	8/16/2007	07081113	000071-43-2	Benzene	N001	0.34	ug/L	J	F	0.16		valid
ET EFFLUENT	TS	8/16/2007	07081113	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
ET EFFLUENT	TS	8/16/2007	07081113	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
ET EFFLUENT	TS	8/16/2007	07081113	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
ET EFFLUENT	TS	8/16/2007	07081113	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
ET EFFLUENT	TS	8/16/2007	07081113	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
ET EFFLUENT	TS	8/16/2007	07081113	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
ET EFFLUENT	TS	8/16/2007	07081113	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
ET EFFLUENT	TS	8/16/2007	07081113	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
ET EFFLUENT	TS	8/16/2007	07081113	000156-59-2	cis-1,2-Dichloroethene	N001	51	ug/L		F	0.15		valid
ET EFFLUENT	TS	8/16/2007	07081113	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
ET EFFLUENT	TS	8/16/2007	07081113	000075-09-2	Methylene chloride	N001	0.73	ug/L	JB	F	0.32	U	
ET EFFLUENT	TS	8/16/2007	07081113	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
ET EFFLUENT	TS	8/16/2007	07081113	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
ET EFFLUENT	TS	8/16/2007	07081113	000127-18-4	Tetrachloroethene	N001	4.4	ug/L		F	0.2		valid
ET EFFLUENT	TS	8/16/2007	07081113	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
ET EFFLUENT	TS	8/16/2007	07081113	000100-41-4	Total Xylene	N001	0.16	ug/L	U	F	0.16		valid
ET EFFLUENT	TS	8/16/2007	07081113	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
ET EFFLUENT	TS	8/16/2007	07081113	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
ET EFFLUENT	TS	8/16/2007	07081113	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
ET EFFLUENT	TS	8/16/2007	07081113	000079-01-6	Trichloroethene	N001	1.1	ug/L		F	0.16		valid
ET EFFLUENT	TS	8/16/2007	07081113	000075-01-4	Vinyl chloride	N001	1.7	ug/L		F	0.17		valid
ET INFLUENT	TS	8/16/2007	07081113	000071-55-6	1,1,1-Trichloroethane	N001	2.6	ug/L	U	F	2.6		valid
ET INFLUENT	TS	8/16/2007	07081113	000079-34-5	1,1,2,2-Tetrachloroethane	N001	3.2	ug/L	U	F	3.2		valid
ET INFLUENT	TS	8/16/2007	07081113	000079-00-5	1,1,2-Trichloroethane	N001	5.1	ug/L	U	F	5.1		valid
ET INFLUENT	TS	8/16/2007	07081113	000075-35-4	1,1-Dichloroethene	N001	3.9	ug/L	J	F	2.2		valid
ET INFLUENT	TS	8/16/2007	07081113	000120-82-1	1,2,4-Trichlorobenzene	N001	5.1	ug/L	U	F	5.1		valid
ET INFLUENT	TS	8/16/2007	07081113	000096-12-8	1,2-Dibromo-3-chloropropane	N001	24	ug/L	U	F	24		valid
ET INFLUENT	TS	8/16/2007	07081113	000106-93-4	1,2-Dibromoethane	N001	2.9	ug/L	U	F	2.9		valid
ET INFLUENT	TS	8/16/2007	07081113	000095-50-1	1,2-Dichlorobenzene	N001	2.1	ug/L	U	F	2.1		valid
ET INFLUENT	TS	8/16/2007	07081113	000107-06-2	1,2-Dichloroethane	N001	2.1	ug/L	U	F	2.1		valid
ET INFLUENT	TS	8/16/2007	07081113	000078-87-5	1,2-Dichloropropane	N001	2.1	ug/L	U	F	2.1		valid
ET INFLUENT	TS	8/16/2007	07081113	000541-73-1	1,3-Dichlorobenzene	N001	2.6	ug/L	U	F	2.6		valid
ET INFLUENT	TS	8/16/2007	07081113	000106-46-7	1,4-Dichlorobenzene	N001	2.6	ug/L	U	F	2.6		valid
ET INFLUENT	TS	8/16/2007	07081113	000071-43-2	Benzene	N001	2.6	ug/L	U	F	2.6		valid
ET INFLUENT	TS	8/16/2007	07081113	000075-27-4	Bromodichloromethane	N001	2.7	ug/L	U	F	2.7		valid

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LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE_ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE_TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
ET INFLUENT	TS	8/16/2007	07081113	000075-25-2	Bromoform	N001	3	ug/L	U	F	3		valid
ET INFLUENT	TS	8/16/2007	07081113	000074-83-9	Bromomethane	N001	3.4	ug/L	U	F	3.4		valid
ET INFLUENT	TS	8/16/2007	07081113	000056-23-5	Carbon tetrachloride	N001	150	ug/L		F	3		valid
ET INFLUENT	TS	8/16/2007	07081113	000108-90-7	Chlorobenzene	N001	2.7	ug/L	U	F	2.7		valid
ET INFLUENT	TS	8/16/2007	07081113	000124-48-1	Chlorodibromomethane	N001	2.7	ug/L	U	F	2.7		valid
ET INFLUENT	TS	8/16/2007	07081113	000067-66-3	Chloroform	N001	81	ug/L		F	2.6		valid
ET INFLUENT	TS	8/16/2007	07081113	000074-87-3	Chloromethane	N001	4.8	ug/L	U	F	4.8		valid
ET INFLUENT	TS	8/16/2007	07081113	000156-59-2	cis-1,2-Dichloroethene	N001	32	ug/L		F	2.4		valid
ET INFLUENT	TS	8/16/2007	07081113	000087-68-3	Hexachlorobutadiene	N001	1.9	ug/L	U	F	1.9		valid
ET INFLUENT	TS	8/16/2007	07081113	000075-09-2	Methylene chloride	N001	8	ug/L	J B	F	5.1	U	
ET INFLUENT	TS	8/16/2007	07081113	000091-20-3	Naphthalene	N001	3.5	ug/L	U	F	3.5		valid
ET INFLUENT	TS	8/16/2007	07081113	000100-42-5	Styrene	N001	2.7	ug/L	U	F	2.7		valid
ET INFLUENT	TS	8/16/2007	07081113	000127-18-4	Tetrachloroethene	N001	390	ug/L		F	3.2		valid
ET INFLUENT	TS	8/16/2007	07081113	000108-88-3	Toluene	N001	2.7	ug/L	U	F	2.7		valid
ET INFLUENT	TS	8/16/2007	07081113	000100-41-4	Total Xylene	N001	2.6	ug/L	U	F	2.6		valid
ET INFLUENT	TS	8/16/2007	07081113	001330-20-7	Total Xylenes	N001	3	ug/L	U	F	3		valid
ET INFLUENT	TS	8/16/2007	07081113	000156-60-5	trans-1,2-Dichloroethene	N001	2.4	ug/L	U	F	2.4		valid
ET INFLUENT	TS	8/16/2007	07081113	010061-02-6	trans-1,3-dichloropropene	N001	3	ug/L	U	F	3		valid
ET INFLUENT	TS	8/16/2007	07081113	000079-01-6	Trichloroethene	N001	2500	ug/L		F	16		valid
ET INFLUENT	TS	8/16/2007	07081113	000075-01-4	Vinyl chloride	N001	2.7	ug/L	U	F	2.7		valid
GS03	SL	7/5/2007	07071017	AM-241	Americium-241	N001	0.000262	pCi/L	U	F	0.0215	0.00439	valid
GS03	SL	7/5/2007	07071017	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.023	mg/L	HJ	F	0.01		J
GS03	SL	7/5/2007	07071017	PU-239,240	Plutonium-239, 240	N001	0	pCi/L	U	F	0.00927	0.00402	valid
GS03	SL	7/5/2007	07071017	U-234	Uranium-234	N001	2.07	pCi/L		F	0.262	0.455	valid
GS03	SL	7/5/2007	07071017	U-235+236	Uranium-235/236	N001	0.0681	pCi/L	U	F	0.223	0.0774	valid
GS03	SL	7/5/2007	07071017	U-238	Uranium-238	N001	1.85	pCi/L		F	0.351	0.422	valid
GS03	SL	7/9/2007	07071017	AM-241	Americium-241	N001	0.00233	pCi/L	U	F	0.0212	0.00311	valid
GS03	SL	7/9/2007	07071017	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.025	mg/L	HJ	F	0.01		J
GS03	SL	7/9/2007	07071017	PU-239,240	Plutonium-239, 240	N001	0.000865	pCi/L	U	F	0.00829	0.00379	valid
GS03	SL	7/9/2007	07071017	U-234	Uranium-234	N001	1.95	pCi/L		F	0.195	0.397	valid
GS03	SL	7/9/2007	07071017	U-235+236	Uranium-235/236	N001	0.0169	pCi/L	U	F	0.166	0.0992	valid
GS03	SL	7/9/2007	07071017	U-238	Uranium-238	N001	1.5	pCi/L		F	0.261	0.335	valid
GS03	SL	7/12/2007	07071017	AM-241	Americium-241	N001	-0.00287	pCi/L	U	F	0.0241	0.00413	valid
GS03	SL	7/12/2007	07071017	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.02	mg/L	J	F	0.01		valid
GS03	SL	7/12/2007	07071017	PU-239,240	Plutonium-239, 240	N001	-0.000967	pCi/L	U	F	0.0119	0.00502	valid
GS03	SL	7/12/2007	07071017	U-234	Uranium-234	N001	1.87	pCi/L		F	0.199	0.386	valid
GS03	SL	7/12/2007	07071017	U-235+236	Uranium-235/236	N001	0.19	pCi/L		F	0.17	0.133	J
GS03	SL	7/12/2007	07071017	U-238	Uranium-238	N001	1.63	pCi/L		F	0.267	0.349	valid
GS03	SL	7/16/2007	07071068	AM-241	Americium-241	N001	0.0169	pCi/L	U	F	0.0353	0.0123	J
GS03	SL	7/16/2007	07071068	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.05	mg/L	U	F	0.05		valid
GS03	SL	7/16/2007	07071068	PU-239,240	Plutonium-239, 240	N001	-0.00848	pCi/L	U	F	0.0257	0.0128	valid
GS03	SL	7/16/2007	07071068	U-234	Uranium-234	N001	1.65	pCi/L		F	0.224	0.391	valid
GS03	SL	7/16/2007	07071068	U-235+236	Uranium-235/236	N001	0.0971	pCi/L	U	F	0.191	0.127	valid
GS03	SL	7/16/2007	07071068	U-238	Uranium-238	N001	1.46	pCi/L		F	0.3	0.379	valid
GS03	SL	7/19/2007	07071068	AM-241	Americium-241	N001	0.00659	pCi/L	U	F	0.036	0.0159	J
GS03	SL	7/19/2007	07071068	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.019	mg/L	J	F	0.01		valid
GS03	SL	7/19/2007	07071068	PU-239,240	Plutonium-239, 240	N001	-0.000935	pCi/L	U	F	0.0199	0.00756	valid
GS03	SL	7/19/2007	07071068	U-234	Uranium-234	N001	1.48	pCi/L		F	0.203	0.343	valid
GS03	SL	7/19/2007	07071068	U-235+236	Uranium-235/236	N001	0.176	pCi/L		F	0.173	0.139	J
GS03	SL	7/19/2007	07071068	U-238	Uranium-238	N001	1.24	pCi/L		F	0.272	0.317	valid
GS03	SL	7/23/2007	07071068	AM-241	Americium-241	N001	-0.00525	pCi/L	U	F	0.0275	0.014	valid
GS03	SL	7/23/2007	07071068	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.017	mg/L	J	F	0.01		valid
GS03	SL	7/23/2007	07071068	PU-239,240	Plutonium-239, 240	N001	-0.00627	pCi/L	U	F	0.0222	0.01	valid
GS03	SL	7/23/2007	07071068	U-234	Uranium-234	N001	1.8	pCi/L		F	0.236	0.408	valid
GS03	SL	7/23/2007	07071068	U-235+236	Uranium-235/236	N001	0.225	pCi/L		F	0.201	0.157	J
GS03	SL	7/23/2007	07071068	U-238	Uranium-238	N001	1.57	pCi/L		F	0.316	0.373	valid
GS05	SL	5/7/2007	07101196	07440-38-2	Arsenic	N001	5	ug/L	U	F	5		valid

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LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE_ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE_TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
GS05	SL	5/7/2007	07101196	07440-41-7	Beryllium	N001	1	ug/L	U	F	1		valid
GS05	SL	5/7/2007	07101196	07440-42-8	Boron	N001	34.5	ug/L		F	10		U
GS05	SL	5/7/2007	07101196	07440-43-9	Cadmium	0001	1	ug/L	U	F	1		valid
GS05	SL	5/7/2007	07101196	07440-47-3	Chromium	N001	6.8	ug/L	B	F	1		valid
GS05	SL	5/7/2007	07101196	07440-50-8	Copper	0001	3	ug/L	U	F	3		valid
GS05	SL	5/7/2007	07101196	07439-92-1	Lead	0001	2.5	ug/L	U	F	2.5		valid
GS05	SL	5/7/2007	07101196	07439-97-6	Mercury	N001	0.03	ug/L	U	F	0.03		valid
GS05	SL	5/7/2007	07101196	07440-02-0	Nickel	0001	1	ug/L	U	F	1		valid
GS05	SL	5/7/2007	07101196	07782-49-2	Selenium	N001	5	ug/L	U	F	5		valid
GS05	SL	5/7/2007	07101196	07440-22-4	Silver	0001	1.3	ug/L	B	F	1		U
GS05	SL	5/7/2007	07101196	U-234	Uranium-234	N001	0.4	pCi/L		F	0.0677	0.0832	J
GS05	SL	5/7/2007	07101196	U-235+236	Uranium-235/236	N001	0.0256	pCi/L	U	F	0.0529	0.0192	valid
GS05	SL	5/7/2007	07101196	U-238	Uranium-238	N001	0.338	pCi/L		F	0.0594	0.073	valid
GS05	SL	5/7/2007	07101196	07440-66-6	Zinc	0001	5.7	ug/L	B	F	2		valid
GS05	SL	7/11/2007	07071016	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
GS05	SL	7/11/2007	07071016	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
GS05	SL	7/11/2007	07071016	000079-05-0	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
GS05	SL	7/11/2007	07071016	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
GS05	SL	7/11/2007	07071016	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
GS05	SL	7/11/2007	07071016	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
GS05	SL	7/11/2007	07071016	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
GS05	SL	7/11/2007	07071016	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
GS05	SL	7/11/2007	07071016	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
GS05	SL	7/11/2007	07071016	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
GS05	SL	7/11/2007	07071016	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
GS05	SL	7/11/2007	07071016	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
GS05	SL	7/11/2007	07071016	000107-02-8	Acrolein	N001	2.8	ug/L	U	F	2.8		valid
GS05	SL	7/11/2007	07071016	000107-13-1	Acrylonitrile	N001	1.4	ug/L	U	F	1.4		valid
GS05	SL	7/11/2007	07071016	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
GS05	SL	7/11/2007	07071016	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
GS05	SL	7/11/2007	07071016	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
GS05	SL	7/11/2007	07071016	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
GS05	SL	7/11/2007	07071016	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
GS05	SL	7/11/2007	07071016	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
GS05	SL	7/11/2007	07071016	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
GS05	SL	7/11/2007	07071016	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
GS05	SL	7/11/2007	07071016	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
GS05	SL	7/11/2007	07071016	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.150		valid
GS05	SL	7/11/2007	07071016	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
GS05	SL	7/11/2007	07071016	M&P XYLENE	m,p-Xylene	N001	0.34	ug/L	U	F	0.34		valid
GS05	SL	7/11/2007	07071016	07439-97-6	Mercury	N001	0.027	ug/L	U	F	0.027	J	
GS05	SL	7/11/2007	07071016	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
GS05	SL	7/11/2007	07071016	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
GS05	SL	7/11/2007	07071016	000095-47-6	o-Xylene	N001	0.19	ug/L	U	F	0.19		valid
GS05	SL	7/11/2007	07071016	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
GS05	SL	7/11/2007	07071016	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
GS05	SL	7/11/2007	07071016	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
GS05	SL	7/11/2007	07071016	000100-41-4	Total Xylene	N001	0.16	ug/L	U	F	0.16		valid
GS05	SL	7/11/2007	07071016	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
GS05	SL	7/11/2007	07071016	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
GS05	SL	7/11/2007	07071016	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
GS05	SL	7/11/2007	07071016	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
GS08	SL	7/5/2007	07071017	AM-241	Americium-241	N001	-0.00208	pCi/L	U	F	0.0199	0.00342	valid
GS08	SL	7/5/2007	07071017	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.251	mg/L	H	F	0.01	J	
GS08	SL	7/5/2007	07071017	PU-239,240	Plutonium-239, 240	N001	-0.000833	pCi/L	U	F	0.0112	0.0049	valid
GS08	SL	7/5/2007	07071017	U-234	Uranium-234	N001	2.33	pCi/L		F	0.192	0.435	valid
GS08	SL	7/5/2007	07071017	U-235+236	Uranium-235/236	N001	0.166	pCi/L		F	0.163	0.105	J

## Appendix A

## Analytical Results for Water Samples - Third Quarter of CY 2007

LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE_ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
GS08	SL	7/5/2007	07071017	U-238	Uranium-238	N001	2.37	pCi/L	F	0.257	0.443	valid	
GS08	SL	7/9/2007	07071017	AM-241	Americium-241	N001	0.000357	pCi/L	U	F	0.022	0.00453	valid
GS08	SL	7/9/2007	07071017	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.12	mg/L	H	F	0.010		J
GS08	SL	7/9/2007	07071017	PU-239,240	Plutonium-239, 240	N001	-0.00174	pCi/L	U	F	0.014	0.00637	valid
GS08	SL	7/9/2007	07071017	U-234	Uranium-234	N001	2.16	pCi/L		F	0.325	0.516	valid
GS08	SL	7/9/2007	07071017	U-235+236	Uranium-235/236	N001	0.0563	pCi/L	U	F	0.277	0.175	valid
GS08	SL	7/9/2007	07071017	U-238	Uranium-238	N001	2.07	pCi/L		F	0.436	0.499	valid
GS10	SL	7/5/2007	07071068	AM-241	Americium-241	N001	-0.000259	pCi/L	U	F	0.0181	0.00969	valid
GS10	SL	7/5/2007	07071068	07440-41-7	Beryllium	N001	1	ug/L	U	F	1		valid
GS10	SL	7/5/2007	07071068	07440-43-9	Cadmium	0001	0.11	ug/L	U	F	0.11		valid
GS10	SL	7/5/2007	07071068	07440-47-3	Chromium	N001	1	ug/L	U	F	1		valid
GS10	SL	7/5/2007	07071068	HARDNESS	Hardness	N001	488	mg/L		F	2		valid
GS10	SL	7/5/2007	07071068	PU-239,240	Plutonium-239, 240	N001	0.0134	pCi/L	U	F	0.0159	0.0108	valid
GS10	SL	7/5/2007	07071068	07440-22-4	Silver	0001	0.2	ug/L	U	F	0.2		valid
GS10	SL	7/5/2007	07071068	U-234	Uranium-234	N001	3.36	pCi/L		F	0.215	0.588	valid
GS10	SL	7/5/2007	07071068	U-235+236	Uranium-235/236	N001	0.278	pCi/L		F	0.182	0.144	J
GS10	SL	7/5/2007	07071068	U-238	Uranium-238	N001	3.24	pCi/L		F	0.287	0.578	valid
GS10	SL	7/23/2007	07091158	AM-241	Americium-241	N002	-0.00147	pCi/L	U	F	0.0241	0.0107	valid
GS10	SL	7/23/2007	07091158	07440-41-7	Beryllium	N002	1	ug/L	U	F	1		valid
GS10	SL	7/23/2007	07091158	07440-43-9	Cadmium	0001	0.11	ug/L	U	F	0.11		valid
GS10	SL	7/23/2007	07091158	07440-47-3	Chromium	N002	1	ug/L	U	F	1		valid
GS10	SL	7/23/2007	07091158	HARDNESS	Hardness	N002	605	mg/L		F	2		valid
GS10	SL	7/23/2007	07091158	PU-239,240	Plutonium-239, 240	N002	0.00297	pCi/L	U	F	0.019	0.00514	valid
GS10	SL	7/23/2007	07091158	07440-22-4	Silver	0001	0.2	ug/L	U	F	0.2		valid
GS10	SL	7/23/2007	07091158	U-234	Uranium-234	N002	3.48	pCi/L		F	0.0319	0.416	valid
GS10	SL	7/23/2007	07091158	U-235+236	Uranium-235/236	N002	0.165	pCi/L		F	0.0228	0.0372	valid
GS10	SL	7/23/2007	07091158	U-238	Uranium-238	N002	3.09	pCi/L		F	0.0252	0.371	valid
GS10	SL	8/6/2007	07081079	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	8/6/2007	07081079	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
GS10	SL	8/6/2007	07081079	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
GS10	SL	8/6/2007	07081079	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
GS10	SL	8/6/2007	07081079	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
GS10	SL	8/6/2007	07081079	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
GS10	SL	8/6/2007	07081079	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
GS10	SL	8/6/2007	07081079	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
GS10	SL	8/6/2007	07081079	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
GS10	SL	8/6/2007	07081079	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
GS10	SL	8/6/2007	07081079	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	8/6/2007	07081079	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	8/6/2007	07091158	AM-241	Americium-241	N002	-0.000674	pCi/L	U	F	0.0239	0.00265	valid
GS10	SL	8/6/2007	07081079	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	8/6/2007	07091158	07440-41-7	Beryllium	N002	1	ug/L	U	F	1		valid
GS10	SL	8/6/2007	07081079	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
GS10	SL	8/6/2007	07081079	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
GS10	SL	8/6/2007	07081079	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
GS10	SL	8/6/2007	07091158	07440-43-9	Cadmium	0002	0.11	ug/L	U	F	0.11		valid
GS10	SL	8/6/2007	07081079	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
GS10	SL	8/6/2007	07081079	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
GS10	SL	8/6/2007	07081079	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
GS10	SL	8/6/2007	07081079	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	8/6/2007	07081079	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
GS10	SL	8/6/2007	07091158	07440-47-3	Chromium	N002	1	ug/L	U	F	1		valid
GS10	SL	8/6/2007	07081079	000156-59-2	cis-1,2-Dichloroethene	N001	1.7	ug/L	U	F	0.15		valid
GS10	SL	8/6/2007	07091158	HARDNESS	Hardness	N002	532	mg/L		F	2		valid
GS10	SL	8/6/2007	07081079	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
GS10	SL	8/6/2007	07081079	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
GS10	SL	8/6/2007	07081079	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid

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LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE_ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
GS10	SL	8/6/2007	07091158	PU-239,240	Plutonium-239, 240	N002	0.00652	pCi/L	U	F	0.0208	0.00605	valid
GS10	SL	8/6/2007	07091158	07440-22-4	Silver	N002	0.2	ug/L	U	F	0.2		valid
GS10	SL	8/6/2007	07081079	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
GS10	SL	8/6/2007	07081079	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
GS10	SL	8/6/2007	07081079	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
GS10	SL	8/6/2007	07081079	000100-41-4	Total Xylene	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	8/6/2007	07081079	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
GS10	SL	8/6/2007	07081079	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
GS10	SL	8/6/2007	07081079	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
GS10	SL	8/6/2007	07081079	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	8/6/2007	07091158	U-234	Uranium-234	N002	3.34	pCi/L		F	0.0301	0.408	valid
GS10	SL	8/6/2007	07091158	U-235+236	Uranium-235/236	N002	0.197	pCi/L		F	0.0216	0.0406	valid
GS10	SL	8/6/2007	07091158	U-238	Uranium-238	N002	3.02	pCi/L		F	0.0238	0.37	valid
GS10	SL	8/6/2007	07081079	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
GS10	SL	8/16/2007	07081113	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	8/16/2007	07081113	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
GS10	SL	8/16/2007	07081113	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
GS10	SL	8/16/2007	07081113	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
GS10	SL	8/16/2007	07081113	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
GS10	SL	8/16/2007	07081113	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
GS10	SL	8/16/2007	07081113	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
GS10	SL	8/16/2007	07081113	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
GS10	SL	8/16/2007	07081113	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
GS10	SL	8/16/2007	07081113	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
GS10	SL	8/16/2007	07081113	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	8/16/2007	07081113	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	8/16/2007	07081113	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	8/16/2007	07081113	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
GS10	SL	8/16/2007	07081113	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
GS10	SL	8/16/2007	07081113	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
GS10	SL	8/16/2007	07081113	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
GS10	SL	8/16/2007	07081113	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
GS10	SL	8/16/2007	07081113	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
GS10	SL	8/16/2007	07081113	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	8/16/2007	07081113	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
GS10	SL	8/16/2007	07081113	000156-59-2	cis-1,2-Dichloroethene	N001	2.7	ug/L	U	F	0.15	U	
GS10	SL	8/16/2007	07081113	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
GS10	SL	8/16/2007	07081113	000075-09-2	Methylene chloride	N001	0.42	ug/L	J B	F	0.32	U	
GS10	SL	8/16/2007	07081113	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
GS10	SL	8/16/2007	07081113	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
GS10	SL	8/16/2007	07081113	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
GS10	SL	8/16/2007	07081113	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
GS10	SL	8/16/2007	07081113	000100-41-4	Total Xylene	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	8/16/2007	07081113	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
GS10	SL	8/16/2007	07081113	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
GS10	SL	8/16/2007	07081113	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
GS10	SL	8/16/2007	07081113	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	8/16/2007	07081113	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
GS10	SL	8/21/2007	07091158	AM-241	Americium-241	N001	0.00527	pCi/L	U	F	0.0246	0.0049	valid
GS10	SL	8/21/2007	07091158	07440-41-7	Beryllium	N001	1	ug/L	U	F	1		valid
GS10	SL	8/21/2007	07091158	07440-43-9	Cadmium	N001	0.11	ug/L	U	F	0.11		valid
GS10	SL	8/21/2007	07091158	07440-47-3	Chromium	N001	1	ug/L	U	F	1		valid
GS10	SL	8/21/2007	07091158	HARDNESS	Hardness	N001	508	mg/L		F	2		valid
GS10	SL	8/21/2007	07091158	PU-239,240	Plutonium-239, 240	N001	0.00874	pCi/L	U	F	0.021	0.00682	valid
GS10	SL	8/21/2007	07091158	07440-22-4	Silver	N001	0.2	ug/L	U	F	0.2		valid
GS10	SL	8/21/2007	07091158	U-234	Uranium-234	N001	3.32	pCi/L		F	0.033	0.411	valid
GS10	SL	8/21/2007	07091158	U-235+236	Uranium-235/236	N001	0.202	pCi/L		F	0.0237	0.0427	valid

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LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE_ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE_TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
GS10	SL	8/21/2007	07091158	U-238	Uranium-238	N001	3	pCi/L	U	F	0.0261	0.373	valid
GS10	SL	9/6/2007	07101196	AM-241	Americium-241	N001	0.00213	pCi/L	U	F	0.0261	0.0103	valid
GS10	SL	9/6/2007	07101196	07440-41-7	Beryllium	N001	1	ug/L	U	F	1		valid
GS10	SL	9/6/2007	07101196	07440-43-9	Cadmium	0001	0.11	ug/L	U	F	0.11		valid
GS10	SL	9/6/2007	07101196	07440-47-3	Chromium	N001	1.3	ug/L	B	F	1		valid
GS10	SL	9/6/2007	07101196	HARDNESS	Hardness	N001	387	mg/L		F	2		valid
GS10	SL	9/6/2007	07101196	PU-239,240	Plutonium-239, 240	N001	0.00187	pCi/L	U	F	0.018	0.00581	valid
GS10	SL	9/6/2007	07101196	07440-22-4	Silver	0001	0.2	ug/L	U	F	0.2		valid
GS10	SL	9/6/2007	07101196	U-234	Uranium-234	N001	3.18	pCi/L		F	0.0686	0.397	valid
GS10	SL	9/6/2007	07101196	U-235+236	Uranium-235/236	N001	0.2	pCi/L		F	0.0536	0.0577	valid
GS10	SL	9/6/2007	07101196	U-238	Uranium-238	N001	2.77	pCi/L		F	0.0602	0.351	valid
GS11	SL	7/5/2007	07071017	AM-241	Americium-241	N001	0.000702	pCi/L	U	F	0.019	0.00487	valid
GS11	SL	7/5/2007	07071017	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.083	mg/L	H	F	0.01		J
GS11	SL	7/5/2007	07071017	PU-239,240	Plutonium-239, 240	N001	-0.00265	pCi/L	U	F	0.0127	0.00519	valid
GS11	SL	7/5/2007	07071017	U-234	Uranium-234	N001	1.63	pCi/L		F	0.222	0.38	valid
GS11	SL	7/5/2007	07071017	U-235+236	Uranium-235/236	N001	0.0962	pCi/L	U	F	0.189	0.1	valid
GS11	SL	7/5/2007	07071017	U-238	Uranium-238	N001	1.82	pCi/L		F	0.298	0.395	valid
GS11	SL	7/12/2007	07071017	AM-241	Americium-241	N001	0.000169	pCi/L	U	F	0.0211	0.00306	valid
GS11	SL	7/12/2007	07071017	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.013	mg/L	J	F	0.01		valid
GS11	SL	7/12/2007	07071017	PU-239,240	Plutonium-239, 240	N001	-0.000888	pCi/L	U	F	0.00982	0.00389	valid
GS11	SL	7/12/2007	07071017	U-234	Uranium-234	N001	1.96	pCi/L		F	0.217	0.411	valid
GS11	SL	7/12/2007	07071017	U-235+236	Uranium-235/236	N001	0.0375	pCi/L	U	F	0.184	0.104	valid
GS11	SL	7/12/2007	07071017	U-238	Uranium-238	N001	2.02	pCi/L		F	0.29	0.413	valid
GS11	SL	7/16/2007	07071068	AM-241	Americium-241	N001	0.00113	pCi/L	U	F	0.0308	0.0111	valid
GS11	SL	7/16/2007	07071068	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.105	mg/L	J	F	0.05		valid
GS11	SL	7/16/2007	07071068	PU-239,240	Plutonium-239, 240	N001	0.0464	pCi/L		F	0.0206	0.0152	J
GS11	SL	7/16/2007	07071068	U-234	Uranium-234	N001	2.31	pCi/L		F	0.162	0.407	valid
GS11	SL	7/16/2007	07071068	U-235+236	Uranium-235/236	N001	0.267	pCi/L		F	0.138	0.141	J
GS11	SL	7/16/2007	07071068	U-238	Uranium-238	N001	1.74	pCi/L		F	0.217	0.337	valid
GS11	SL	7/19/2007	07071068	AM-241	Americium-241	N001	-0.0381	pCi/L	U	F	0.0348	0.0225	J
GS11	SL	7/19/2007	07071068	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.385	mg/L		F	0.01		valid
GS11	SL	7/19/2007	07071068	PU-239,240	Plutonium-239, 240	N001	0.0113	pCi/L	U	F	0.0219	0.00837	valid
GS11	SL	7/19/2007	07071068	U-234	Uranium-234	N001	1.5	pCi/L		F	0.168	0.345	valid
GS11	SL	7/19/2007	07071068	U-235+236	Uranium-235/236	N001	0.087	pCi/L	U	F	0.143	0.127	valid
GS11	SL	7/19/2007	07071068	U-238	Uranium-238	N001	1.44	pCi/L		F	0.224	0.327	valid
GS11	SL	7/23/2007	07071068	AM-241	Americium-241	N001	-0.0012	pCi/L	U	F	0.034	0.0136	J
GS11	SL	7/23/2007	07071068	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.045	mg/L	J	F	0.01		valid
GS11	SL	7/23/2007	07071068	PU-239,240	Plutonium-239, 240	N001	-0.00857	pCi/L	U	F	0.0202	0.0107	valid
GS11	SL	7/23/2007	07071068	U-234	Uranium-234	N001	1.71	pCi/L		F	0.172	0.373	valid
GS11	SL	7/23/2007	07071068	U-235+236	Uranium-235/236	N001	0.104	pCi/L	U	F	0.146	0.121	valid
GS11	SL	7/23/2007	07071068	U-238	Uranium-238	N001	1.24	pCi/L		F	0.23	0.322	valid
GS59	SL	5/7/2007	07101196	07440-38-2	Arsenic	N001	5	ug/L	U	F	5		valid
GS59	SL	5/7/2007	07101196	07440-41-7	Beryllium	N001	1	ug/L	U	F	1		valid
GS59	SL	5/7/2007	07101196	07440-42-8	Boron	N001	40.1	ug/L		F	10		U
GS59	SL	5/7/2007	07101196	07440-43-9	Cadmium	0001	1	ug/L	U	F	1		valid
GS59	SL	5/7/2007	07101196	07440-47-3	Chromium	N001	1	ug/L	U	F	1		valid
GS59	SL	5/7/2007	07101196	07440-50-8	Copper	0001	3	ug/L	U	F	3		valid
GS59	SL	5/7/2007	07101196	07439-92-1	Lead	0001	2.5	ug/L	U	F	2.5		valid
GS59	SL	5/7/2007	07101196	07439-97-6	Mercury	N001	0.03	ug/L	U	F	0.03		valid
GS59	SL	5/7/2007	07101196	07440-02-0	Nickel	0001	1	ug/L	U	F	1		valid
GS59	SL	5/7/2007	07101196	07782-49-2	Selenium	N001	5	ug/L	U	F	5		valid
GS59	SL	5/7/2007	07101196	07440-22-4	Silver	0001	1	ug/L	U	F	1		valid
GS59	SL	5/7/2007	07101196	U-234	Uranium-234	N001	0.435	pCi/L		F	0.0705	0.0891	J
GS59	SL	5/7/2007	07101196	U-235+236	Uranium-235/236	N001	0.0343	pCi/L	U	F	0.0551	0.0292	valid
GS59	SL	5/7/2007	07101196	U-238	Uranium-238	N001	0.278	pCi/L		F	0.0619	0.0655	valid
GS59	SL	5/7/2007	07101196	07440-66-6	Zinc	0001	5.8	ug/L	B	F	2		valid
GS59	SL	7/11/2007	07071016	000071-55-6	1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid

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Analytical Results for Water Samples - Third Quarter of CY 2007

LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
GS59	SL	7/11/2007	07071016	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
GS59	SL	7/11/2007	07071016	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
GS59	SL	7/11/2007	07071016	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
GS59	SL	7/11/2007	07071016	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
GS59	SL	7/11/2007	07071016	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
GS59	SL	7/11/2007	07071016	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
GS59	SL	7/11/2007	07071016	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
GS59	SL	7/11/2007	07071016	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
GS59	SL	7/11/2007	07071016	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
GS59	SL	7/11/2007	07071016	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
GS59	SL	7/11/2007	07071016	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
GS59	SL	7/11/2007	07071016	000107-02-8	Acrolein	N001	2.8	ug/L	U	F	2.8		valid
GS59	SL	7/11/2007	07071016	000107-13-1	Acrylonitrile	N001	1.4	ug/L	U	F	1.4		valid
GS59	SL	7/11/2007	07071016	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
GS59	SL	7/11/2007	07071016	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
GS59	SL	7/11/2007	07071016	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
GS59	SL	7/11/2007	07071016	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
GS59	SL	7/11/2007	07071016	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
GS59	SL	7/11/2007	07071016	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
GS59	SL	7/11/2007	07071016	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
GS59	SL	7/11/2007	07071016	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
GS59	SL	7/11/2007	07071016	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
GS59	SL	7/11/2007	07071016	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
GS59	SL	7/11/2007	07071016	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
GS59	SL	7/11/2007	07071016	M&P XYLENE	m,p-Xylene	N001	0.34	ug/L	U	F	0.34		valid
GS59	SL	7/11/2007	07071016	07439-97-6	Mercury	N001	0.027	ug/L	U	F	0.027	J	
GS59	SL	7/11/2007	07071016	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
GS59	SL	7/11/2007	07071016	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
GS59	SL	7/11/2007	07071016	000095-47-6	o-Xylene	N001	0.19	ug/L	U	F	0.19		valid
GS59	SL	7/11/2007	07071016	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
GS59	SL	7/11/2007	07071016	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
GS59	SL	7/11/2007	07071016	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
GS59	SL	7/11/2007	07071016	000100-41-4	Total Xylene	N001	0.16	ug/L	U	F	0.16		valid
GS59	SL	7/11/2007	07071016	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
GS59	SL	7/11/2007	07071016	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
GS59	SL	7/11/2007	07071016	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
GS59	SL	7/11/2007	07071016	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
GWISINFNORTH	TS	7/25/2007	07071047	000071-55-6	1,1,1-Trichloroethane	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000079-34-5	1,1,2,2-Tetrachloroethane	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000079-00-5	1,1,2-Trichloroethane	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000075-35-4	1,1-Dichloroethene	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000120-82-1	1,2,4-Trichlorobenzene	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000106-93-4	1,2-Dibromoethane	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000095-50-1	1,2-Dichlorobenzene	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000107-06-2	1,2-Dichloroethane	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000078-87-5	1,2-Dichloropropane	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000541-73-1	1,3-Dichlorobenzene	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000106-46-7	1,4-Dichlorobenzene	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000107-02-8	Acrolein	N001	5	ug/L	U	F	5		valid
GWISINFNORTH	TS	7/25/2007	07071047	000107-13-1	Acrylonitrile	N001	5	ug/L	U	F	5		valid
GWISINFNORTH	TS	7/25/2007	07071047	07440-38-2	Arsenic	N001	8.9	ug/L	B	F	5		J
GWISINFNORTH	TS	7/25/2007	07071047	000071-43-2	Benzene	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	07440-41-7	Beryllium	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	07440-42-8	Boron	N001	148	ug/L	U	F	10		valid
GWISINFNORTH	TS	7/25/2007	07071047	000075-27-4	Bromodichloromethane	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000075-25-2	Bromoform	N001	1	ug/L	U	F	1		valid

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LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
GWISINFNORTH	TS	7/25/2007	07071047	000074-83-9	Bromomethane	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	07440-43-9	Cadmium	N003	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000056-23-5	Carbon tetrachloride	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000108-90-7	Chlorobenzene	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000124-48-1	Chlorodibromomethane	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000067-66-3	Chloroform	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000074-87-3	Chloromethane	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	07440-47-3	Chromium	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000156-59-2	cis-1,2-Dichloroethene	N001	2.2	ug/L		F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	07440-50-8	Copper	N003	3	ug/L	U	F	3		valid
GWISINFNORTH	TS	7/25/2007	07071047	000087-68-3	Hexachlorobutadiene	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	07439-92-1	Lead	N003	2.5	ug/L	U	F	2.5		valid
GWISINFNORTH	TS	7/25/2007	07071047	M&P XYLENE	m,p-Xylene	N001	2	ug/L	U	F	2		valid
GWISINFNORTH	TS	7/25/2007	07071047	07439-97-6	Mercury	N001	0.03	ug/L	UN	F	0.03	J	
GWISINFNORTH	TS	7/25/2007	07071047	000075-09-2	Methylene chloride	N001	5	ug/L	U	F	5		valid
GWISINFNORTH	TS	7/25/2007	07071047	000091-20-3	Naphthalene	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	07440-02-0	Nickel	N003	4	ug/L	B	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.05	mg/L	U	F	0.05		valid
GWISINFNORTH	TS	7/25/2007	07071047	000095-47-6	o-Xylene	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	07782-49-2	Selenium	N001	5	ug/L	U	F	5		valid
GWISINFNORTH	TS	7/25/2007	07071047	07440-22-4	Silver	N003	1	ug/L	U	F	1	J	
GWISINFNORTH	TS	7/25/2007	07071047	000100-42-5	Styrene	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000127-18-4	Tetrachloroethene	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000108-88-3	Toluene	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000100-41-4	Total Xylene	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000156-60-5	trans-1,2-Dichloroethene	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	010061-02-6	trans-1,3-dichloropropene	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	000079-01-6	Trichloroethene	N001	1	ug/L	U	F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	U-234	Uranium-234	N001	1.64	pCi/L		F	0.121	0.281	valid
GWISINFNORTH	TS	7/25/2007	07071047	U-235+236	Uranium-235/236	N001	0.0307	pCi/L	U	F	0.161	0.0349	valid
GWISINFNORTH	TS	7/25/2007	07071047	U-238	Uranium-238	N001	1.5	pCi/L		F	0.16	0.264	valid
GWISINFNORTH	TS	7/25/2007	07071047	000075-01-4	Vinyl chloride	N001	2.49	ug/L		F	1		valid
GWISINFNORTH	TS	7/25/2007	07071047	07440-66-6	Zinc	N003	3.6	ug/L	B	F	2	U	
MOUND R1-0	TS	7/24/2007	07071046	000071-55-6	1,1,1-Trichloroethane	N001	290	ug/L		F	11		valid
MOUND R1-0	TS	7/24/2007	07071046	000079-34-5	1,1,2,2-Tetrachloroethane	N001	13	ug/L	U	F	13		valid
MOUND R1-0	TS	7/24/2007	07071046	000079-00-5	1,1,2-Trichloroethane	N001	21	ug/L	U	F	21		valid
MOUND R1-0	TS	7/24/2007	07071046	000075-35-4	1,1-Dichloroethene	N001	95	ug/L		F	9.3		valid
MOUND R1-0	TS	7/24/2007	07071046	000120-82-1	1,2,4-Trichlorobenzene	N001	21	ug/L	U	F	21		valid
MOUND R1-0	TS	7/24/2007	07071046	000096-12-8	1,2-Dibromo-3-chloropropane	N001	100	ug/L	U	F	100		valid
MOUND R1-0	TS	7/24/2007	07071046	000106-93-4	1,2-Dibromoethane	N001	12	ug/L	U	F	12		valid
MOUND R1-0	TS	7/24/2007	07071046	000095-50-1	1,2-Dichlorobenzene	N001	8.7	ug/L	U	F	8.7		valid
MOUND R1-0	TS	7/24/2007	07071046	000107-06-2	1,2-Dichloroethane	N001	8.7	ug/L	U	F	8.7		valid
MOUND R1-0	TS	7/24/2007	07071046	000078-87-5	1,2-Dichloropropane	N001	8.7	ug/L	U	F	8.7		valid
MOUND R1-0	TS	7/24/2007	07071046	000541-73-1	1,3-Dichlorobenzene	N001	11	ug/L	U	F	11		valid
MOUND R1-0	TS	7/24/2007	07071046	000106-46-7	1,4-Dichlorobenzene	N001	11	ug/L	U	F	11		valid
MOUND R1-0	TS	7/24/2007	07071046	000071-43-2	Benzene	N001	11	ug/L	U	F	11		valid
MOUND R1-0	TS	7/24/2007	07071046	000075-27-4	Bromodichloromethane	N001	11	ug/L	U	F	11		valid
MOUND R1-0	TS	7/24/2007	07071046	000075-25-2	Bromoform	N001	13	ug/L	U	F	13		valid
MOUND R1-0	TS	7/24/2007	07071046	000074-83-9	Bromomethane	N001	14	ug/L	U	F	14		valid
MOUND R1-0	TS	7/24/2007	07071046	000056-23-5	Carbon tetrachloride	N001	48	ug/L	J	F	13		valid
MOUND R1-0	TS	7/24/2007	07071046	000108-90-7	Chlorobenzene	N001	11	ug/L	U	F	11		valid
MOUND R1-0	TS	7/24/2007	07071046	000124-48-1	Chlorodibromomethane	N001	11	ug/L	U	F	11		valid
MOUND R1-0	TS	7/24/2007	07071046	000067-66-3	Chloroform	N001	77	ug/L		F	11		valid
MOUND R1-0	TS	7/24/2007	07071046	000074-87-3	Chloromethane	N001	20	ug/L	U	F	20		valid
MOUND R1-0	TS	7/24/2007	07071046	000156-59-2	cis-1,2-Dichloroethene	N001	6500	ug/L		F	38		valid
MOUND R1-0	TS	7/24/2007	07071046	000087-68-3	Hexachlorobutadiene	N001	8	ug/L	U	F	8		valid
MOUND R1-0	TS	7/24/2007	07071046	000075-09-2	Methylene chloride	N001	21	ug/L	U	F	21		valid

## Appendix A

Analytical Results for Water Samples - Third Quarter of CY 2007

LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
MOUND R1-0	TS	7/24/2007	07071046	000091-20-3	Naphthalene	N001	15	ug/L	U	F	15		valid
MOUND R1-0	TS	7/24/2007	07071046	000100-42-5	Styrene	N001	11	ug/L	U	F	11		valid
MOUND R1-0	TS	7/24/2007	07071046	000127-18-4	Tetrachloroethene	N001	94	ug/L		F	13		valid
MOUND R1-0	TS	7/24/2007	07071046	000108-88-3	Toluene	N001	11	ug/L	U	F	11		valid
MOUND R1-0	TS	7/24/2007	07071046	000100-41-4	Total Xylene	N001	11	ug/L	U	F	11		valid
MOUND R1-0	TS	7/24/2007	07071046	001330-20-7	Total Xylenes	N001	13	ug/L	U	F	13		valid
MOUND R1-0	TS	7/24/2007	07071046	000156-60-5	trans-1,2-Dichloroethene	N001	10	ug/L	U	F	10		valid
MOUND R1-0	TS	7/24/2007	07071046	010061-02-6	trans-1,3-dichloropropene	N001	13	ug/L	U	F	13		valid
MOUND R1-0	TS	7/24/2007	07071046	000079-01-6	Trichloroethene	N001	88	ug/L		F	11		valid
MOUND R1-0	TS	7/24/2007	07071046	000075-01-4	Vinyl chloride	N001	350	ug/L		F	11		valid
MOUND R1-0	TS	8/6/2007	07081079	000071-55-6	1,1,1-Trichloroethane	N001	370	ug/L		F	4.3		valid
MOUND R1-0	TS	8/6/2007	07081079	000079-34-5	1,1,2,2-Tetrachloroethane	N001	5.3	ug/L	U	F	5.3		valid
MOUND R1-0	TS	8/6/2007	07081079	000079-00-5	1,1,2-Trichloroethane	N001	8.5	ug/L	U	F	8.5		valid
MOUND R1-0	TS	8/6/2007	07081079	000075-35-4	1,1-Dichloroethene	N001	99	ug/L		F	3.7		valid
MOUND R1-0	TS	8/6/2007	07081079	000120-82-1	1,2,4-Trichlorobenzene	N001	8.5	ug/L	U	F	8.5		valid
MOUND R1-0	TS	8/6/2007	07081079	000096-12-8	1,2-Dibromo-3-chloropropane	N001	40	ug/L	U	F	40		valid
MOUND R1-0	TS	8/6/2007	07081079	000106-93-4	1,2-Dibromoethane	N001	4.8	ug/L	U	F	4.8		valid
MOUND R1-0	TS	8/6/2007	07081079	000095-50-1	1,2-Dichlorobenzene	N001	3.5	ug/L	U	F	3.5		valid
MOUND R1-0	TS	8/6/2007	07081079	000107-06-2	1,2-Dichloroethane	N001	3.5	ug/L	U	F	3.5		valid
MOUND R1-0	TS	8/6/2007	07081079	000078-87-5	1,2-Dichloropropane	N001	3.5	ug/L	U	F	3.5		valid
MOUND R1-0	TS	8/6/2007	07081079	000541-73-1	1,3-Dichlorobenzene	N001	4.3	ug/L	U	F	4.3		valid
MOUND R1-0	TS	8/6/2007	07081079	000106-46-7	1,4-Dichlorobenzene	N001	4.3	ug/L	U	F	4.3		valid
MOUND R1-0	TS	8/6/2007	07081079	000071-43-2	Benzene	N001	4.3	ug/L	U	F	4.3		valid
MOUND R1-0	TS	8/6/2007	07081079	000075-27-4	Bromodichloromethane	N001	4.5	ug/L	U	F	4.5		valid
MOUND R1-0	TS	8/6/2007	07081079	000075-25-2	Bromoform	N001	5.1	ug/L	U	F	5.1		valid
MOUND R1-0	TS	8/6/2007	07081079	000074-83-9	Bromomethane	N001	5.6	ug/L	U	F	5.6		valid
MOUND R1-0	TS	8/6/2007	07081079	000056-23-5	Carbon tetrachloride	N001	58	ug/L		F	5.1		valid
MOUND R1-0	TS	8/6/2007	07081079	000108-90-7	Chlorobenzene	N001	4.5	ug/L	U	F	4.5		valid
MOUND R1-0	TS	8/6/2007	07081079	000124-48-1	Chlorodibromomethane	N001	4.5	ug/L	U	F	4.5		valid
MOUND R1-0	TS	8/6/2007	07081079	000067-66-3	Chloroform	N001	99	ug/L		F	4.3		valid
MOUND R1-0	TS	8/6/2007	07081079	000074-87-3	Chloromethane	N001	8	ug/L	U	F	8		valid
MOUND R1-0	TS	8/6/2007	07081079	000156-59-2	cis-1,2-Dichloroethene	N001	7700	ug/L		F	40		valid
MOUND R1-0	TS	8/6/2007	07081079	000087-68-3	Hexachlorobutadiene	N001	3.2	ug/L	U	F	3.2		valid
MOUND R1-0	TS	8/6/2007	07081079	000075-09-2	Methylene chloride	N001	8.5	ug/L	U	F	8.5		valid
MOUND R1-0	TS	8/6/2007	07081079	000091-20-3	Naphthalene	N001	5.9	ug/L	U	F	5.9		valid
MOUND R1-0	TS	8/6/2007	07081079	000100-42-5	Styrene	N001	4.5	ug/L	U	F	4.5		valid
MOUND R1-0	TS	8/6/2007	07081079	000127-18-4	Tetrachloroethene	N001	89	ug/L		F	5.3		valid
MOUND R1-0	TS	8/6/2007	07081079	000108-88-3	Toluene	N001	4.5	ug/L	U	F	4.5		valid
MOUND R1-0	TS	8/6/2007	07081079	000100-41-4	Total Xylene	N001	4.3	ug/L	U	F	4.3		valid
MOUND R1-0	TS	8/6/2007	07081079	001330-20-7	Total Xylenes	N001	5.1	ug/L	U	F	5.1		valid
MOUND R1-0	TS	8/6/2007	07081079	000156-60-5	trans-1,2-Dichloroethene	N001	8.5	ug/L	J	F	4		valid
MOUND R1-0	TS	8/6/2007	07081079	010061-02-6	trans-1,3-dichloropropene	N001	5.1	ug/L	U	F	5.1		valid
MOUND R1-0	TS	8/6/2007	07081079	000079-01-6	Trichloroethene	N001	88	ug/L		F	4.3		valid
MOUND R1-0	TS	8/6/2007	07081079	000075-01-4	Vinyl chloride	N001	420	ug/L		F	4.5		valid
MOUND R1-0	TS	8/16/2007	07081113	000151-55-6	1,1,1-Trichloroethane	N001	180	ug/L		F	1.6		valid
MOUND R1-0	TS	8/16/2007	07081113	000079-34-5	1,1,2,2-Tetrachloroethane	N001	2	ug/L	U	F	2		valid
MOUND R1-0	TS	8/16/2007	07081113	000079-00-5	1,1,2-Trichloroethane	N001	3.2	ug/L	U	F	3.2		valid
MOUND R1-0	TS	8/16/2007	07081113	000075-35-4	1,1-Dichloroethene	N001	47	ug/L		F	1.4		valid
MOUND R1-0	TS	8/16/2007	07081113	000120-82-1	1,2,4-Trichlorobenzene	N001	3.2	ug/L	U	F	3.2		valid
MOUND R1-0	TS	8/16/2007	07081113	000096-12-8	1,2-Dibromo-3-chloropropane	N001	15	ug/L	U	F	15		valid
MOUND R1-0	TS	8/16/2007	07081113	000106-93-4	1,2-Dibromoethane	N001	1.8	ug/L	U	F	1.8		valid
MOUND R1-0	TS	8/16/2007	07081113	000095-50-1	1,2-Dichlorobenzene	N001	1.3	ug/L	U	F	1.3		valid
MOUND R1-0	TS	8/16/2007	07081113	000107-06-2	1,2-Dichloroethane	N001	1.3	ug/L	U	F	1.3		valid
MOUND R1-0	TS	8/16/2007	07081113	000078-87-5	1,2-Dichloropropane	N001	1.3	ug/L	U	F	1.3		valid
MOUND R1-0	TS	8/16/2007	07081113	000541-73-1	1,3-Dichlorobenzene	N001	1.6	ug/L	U	F	1.6		valid
MOUND R1-0	TS	8/16/2007	07081113	000106-46-7	1,4-Dichlorobenzene	N001	1.6	ug/L	U	F	1.6		valid
MOUND R1-0	TS	8/16/2007	07081113	000071-43-2	Benzene	N001	1.6	ug/L	U	F	1.6		valid

## Appendix A

Analytical Results for Water Samples - Third Quarter of CY 2007

LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
MOUND R1-0	TS	8/16/2007	07081113	000075-27-4	Bromodichloromethane	N001	1.7	ug/L	U	F	1.7		valid
MOUND R1-0	TS	8/16/2007	07081113	000075-25-2	Bromoform	N001	1.9	ug/L	U	F	1.9		valid
MOUND R1-0	TS	8/16/2007	07081113	000074-83-9	Bromomethane	N001	2.1	ug/L	U	F	2.1		valid
MOUND R1-0	TS	8/16/2007	07081113	000056-23-5	Carbon tetrachloride	N001	24	ug/L		F	1.9		valid
MOUND R1-0	TS	8/16/2007	07081113	000108-90-7	Chlorobenzene	N001	1.7	ug/L	U	F	1.7		valid
MOUND R1-0	TS	8/16/2007	07081113	000124-48-1	Chlorodibromomethane	N001	1.7	ug/L	U	F	1.7		valid
MOUND R1-0	TS	8/16/2007	07081113	000067-66-3	Chloroform	N001	67	ug/L		F	1.6		valid
MOUND R1-0	TS	8/16/2007	07081113	000074-87-3	Chloromethane	N001	3	ug/L	U	F	3		valid
MOUND R1-0	TS	8/16/2007	07081113	000156-59-2	cis-1,2-Dichloroethene	N001	4500	ug/L		F	12		valid
MOUND R1-0	TS	8/16/2007	07081113	000087-68-3	Hexachlorobutadiene	N001	1.2	ug/L	U	F	1.2		valid
MOUND R1-0	TS	8/16/2007	07081113	000075-09-2	Methylene chloride	N001	4.1	ug/L	J B	F	3.2		U
MOUND R1-0	TS	8/16/2007	07081113	000091-20-3	Naphthalene	N001	2.2	ug/L	U	F	2.2		valid
MOUND R1-0	TS	8/16/2007	07081113	000100-42-5	Styrene	N001	1.7	ug/L	U	F	1.7		valid
MOUND R1-0	TS	8/16/2007	07081113	000127-18-4	Tetrachloroethene	N001	28	ug/L		F	2		valid
MOUND R1-0	TS	8/16/2007	07081113	000108-88-3	Toluene	N001	1.7	ug/L	U	F	1.7		valid
MOUND R1-0	TS	8/16/2007	07081113	000100-41-4	Total Xylene	N001	1.6	ug/L	U	F	1.6		valid
MOUND R1-0	TS	8/16/2007	07081113	001330-20-7	Total Xylenes	N001	1.9	ug/L	U	F	1.9		valid
MOUND R1-0	TS	8/16/2007	07081113	000156-60-5	trans-1,2-Dichloroethene	N001	4	ug/L	J	F	1.5		valid
MOUND R1-0	TS	8/16/2007	07081113	010061-02-6	trans-1,3-dichloropropene	N001	1.9	ug/L	U	F	1.9		valid
MOUND R1-0	TS	8/16/2007	07081113	000079-01-6	Trichloroethene	N001	42	ug/L		F	1.6		valid
MOUND R1-0	TS	8/16/2007	07081113	000075-01-4	Vinyl chloride	N001	420	ug/L		F	1.7		valid
MOUND R2-E	TS	7/24/2007	07071046	000071-55-6	1,1,1-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
MOUND R2-E	TS	7/24/2007	07071046	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.4	ug/L	U	F	0.4		valid
MOUND R2-E	TS	7/24/2007	07071046	000079-00-5	1,1,2-Trichloroethane	N001	0.64	ug/L	U	F	0.64		valid
MOUND R2-E	TS	7/24/2007	07071046	000075-35-4	1,1-Dichloroethene	N001	0.52	ug/L	J	F	0.28		valid
MOUND R2-E	TS	7/24/2007	07071046	000120-82-1	1,2,4-Trichlorobenzene	N001	0.64	ug/L	U	F	0.64		valid
MOUND R2-E	TS	7/24/2007	07071046	000096-12-8	1,2-Dibromo-3-chloropropane	N001	3	ug/L	U	F	3		valid
MOUND R2-E	TS	7/24/2007	07071046	000106-93-4	1,2-Dibromoethane	N001	0.36	ug/L	U	F	0.36		valid
MOUND R2-E	TS	7/24/2007	07071046	000095-50-1	1,2-Dichlorobenzene	N001	0.26	ug/L	U	F	0.26		valid
MOUND R2-E	TS	7/24/2007	07071046	000107-06-2	1,2-Dichloroethane	N001	2.6	ug/L		F	0.26		valid
MOUND R2-E	TS	7/24/2007	07071046	000078-87-5	1,2-Dichloropropane	N001	0.26	ug/L	U	F	0.26		valid
MOUND R2-E	TS	7/24/2007	07071046	000541-73-1	1,3-Dichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
MOUND R2-E	TS	7/24/2007	07071046	000106-46-7	1,4-Dichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
MOUND R2-E	TS	7/24/2007	07071046	000071-43-2	Benzene	N001	2.1	ug/L		F	0.32		valid
MOUND R2-E	TS	7/24/2007	07071046	000075-27-4	Bromodichloromethane	N001	0.34	ug/L	U	F	0.34		valid
MOUND R2-E	TS	7/24/2007	07071046	000075-25-2	Bromoform	N001	0.38	ug/L	U	F	0.38		valid
MOUND R2-E	TS	7/24/2007	07071046	000074-83-9	Bromomethane	N001	0.42	ug/L	U	F	0.42		valid
MOUND R2-E	TS	7/24/2007	07071046	000056-23-5	Carbon tetrachloride	N001	0.38	ug/L	U	F	0.38		valid
MOUND R2-E	TS	7/24/2007	07071046	000108-90-7	Chlorobenzene	N001	0.34	ug/L	U	F	0.34		valid
MOUND R2-E	TS	7/24/2007	07071046	000124-48-1	Chlorodibromomethane	N001	0.34	ug/L	U	F	0.34		valid
MOUND R2-E	TS	7/24/2007	07071046	000067-66-3	Chloroform	N001	0.32	ug/L	U	F	0.32		valid
MOUND R2-E	TS	7/24/2007	07071046	000074-87-3	Chloromethane	N001	0.6	ug/L	U	F	0.6		valid
MOUND R2-E	TS	7/24/2007	07071046	000156-59-2	cis-1,2-Dichloroethene	N001	330	ug/L		F	1.5		valid
MOUND R2-E	TS	7/24/2007	07071046	000087-68-3	Hexachlorobutadiene	N001	0.24	ug/L	U	F	0.24		valid
MOUND R2-E	TS	7/24/2007	07071046	000075-09-2	Methylene chloride	N001	6.7	ug/L		F	0.64		valid
MOUND R2-E	TS	7/24/2007	07071046	000091-20-3	Naphthalene	N001	0.44	ug/L	U	F	0.44		valid
MOUND R2-E	TS	7/24/2007	07071046	000100-42-5	Styrene	N001	0.34	ug/L	U	F	0.34		valid
MOUND R2-E	TS	7/24/2007	07071046	000127-18-4	Tetrachloroethene	N001	0.4	ug/L	U	F	0.4		valid
MOUND R2-E	TS	7/24/2007	07071046	000108-88-3	Toluene	N001	0.34	ug/L	U	F	0.34		valid
MOUND R2-E	TS	7/24/2007	07071046	000100-41-4	Total Xylene	N001	0.32	ug/L	U	F	0.32		valid
MOUND R2-E	TS	7/24/2007	07071046	001330-20-7	Total Xylenes	N001	0.38	ug/L	U	F	0.38		valid
MOUND R2-E	TS	7/24/2007	07071046	000156-60-5	trans-1,2-Dichloroethene	N001	0.3	ug/L	U	F	0.3		valid
MOUND R2-E	TS	7/24/2007	07071046	010061-02-6	trans-1,3-dichloropropene	N001	0.38	ug/L	U	F	0.38		valid
MOUND R2-E	TS	7/24/2007	07071046	000079-01-6	Trichloroethene	N001	0.32	ug/L	U	F	0.32		valid
MOUND R2-E	TS	7/24/2007	07071046	000075-01-4	Vinyl chloride	N001	18	ug/L		F	0.34		valid
MOUND R2-E	TS	8/6/2007	07081079	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
MOUND R2-E	TS	8/6/2007	07081079	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid

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LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
MOUND R2-E	TS	8/6/2007	07081079	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
MOUND R2-E	TS	8/6/2007	07081079	000075-35-4	1,1-Dichloroethene	N001	0.35	ug/L	J	F	0.14		valid
MOUND R2-E	TS	8/6/2007	07081079	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
MOUND R2-E	TS	8/6/2007	07081079	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
MOUND R2-E	TS	8/6/2007	07081079	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
MOUND R2-E	TS	8/6/2007	07081079	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
MOUND R2-E	TS	8/6/2007	07081079	000107-06-2	1,2-Dichloroethane	N001	2.3	ug/L		F	0.13		valid
MOUND R2-E	TS	8/6/2007	07081079	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
MOUND R2-E	TS	8/6/2007	07081079	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
MOUND R2-E	TS	8/6/2007	07081079	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
MOUND R2-E	TS	8/6/2007	07081079	000071-43-2	Benzene	N001	1.7	ug/L		F	0.16		valid
MOUND R2-E	TS	8/6/2007	07081079	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
MOUND R2-E	TS	8/6/2007	07081079	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
MOUND R2-E	TS	8/6/2007	07081079	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
MOUND R2-E	TS	8/6/2007	07081079	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
MOUND R2-E	TS	8/6/2007	07081079	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
MOUND R2-E	TS	8/6/2007	07081079	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
MOUND R2-E	TS	8/6/2007	07081079	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
MOUND R2-E	TS	8/6/2007	07081079	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
MOUND R2-E	TS	8/6/2007	07081079	000156-59-2	cis-1,2-Dichloroethene	N001	130	ug/L		F	0.75		valid
MOUND R2-E	TS	8/6/2007	07081079	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
MOUND R2-E	TS	8/6/2007	07081079	000075-09-2	Methylene chloride	N001	3.3	ug/L		F	0.32		valid
MOUND R2-E	TS	8/6/2007	07081079	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
MOUND R2-E	TS	8/6/2007	07081079	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
MOUND R2-E	TS	8/6/2007	07081079	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
MOUND R2-E	TS	8/6/2007	07081079	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
MOUND R2-E	TS	8/6/2007	07081079	000100-41-4	Total Xylene	N001	0.16	ug/L	U	F	0.16		valid
MOUND R2-E	TS	8/6/2007	07081079	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
MOUND R2-E	TS	8/6/2007	07081079	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
MOUND R2-E	TS	8/6/2007	07081079	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
MOUND R2-E	TS	8/6/2007	07081079	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
MOUND R2-E	TS	8/6/2007	07081079	000075-01-4	Vinyl chloride	N001	8.6	ug/L		F	0.17		valid
MOUND R2-E	TS	8/16/2007	07081113	000071-55-6	1,1,1-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
MOUND R2-E	TS	8/16/2007	07081113	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.4	ug/L	U	F	0.4		valid
MOUND R2-E	TS	8/16/2007	07081113	000079-00-5	1,1,2-Trichloroethane	N001	0.64	ug/L	U	F	0.64		valid
MOUND R2-E	TS	8/16/2007	07081113	000075-35-4	1,1-Dichloroethene	N001	0.4	ug/L	J	F	0.28		valid
MOUND R2-E	TS	8/16/2007	07081113	000120-82-1	1,2,4-Trichlorobenzene	N001	0.64	ug/L	U	F	0.64		valid
MOUND R2-E	TS	8/16/2007	07081113	000096-12-8	1,2-Dibromo-3-chloropropane	N001	3	ug/L	U	F	3		valid
MOUND R2-E	TS	8/16/2007	07081113	000106-93-4	1,2-Dibromoethane	N001	0.36	ug/L	U	F	0.36		valid
MOUND R2-E	TS	8/16/2007	07081113	000095-50-1	1,2-Dichlorobenzene	N001	0.26	ug/L	U	F	0.26		valid
MOUND R2-E	TS	8/16/2007	07081113	000107-06-2	1,2-Dichloroethane	N001	3.6	ug/L		F	0.26		valid
MOUND R2-E	TS	8/16/2007	07081113	000078-87-5	1,2-Dichloropropane	N001	0.26	ug/L	U	F	0.26		valid
MOUND R2-E	TS	8/16/2007	07081113	000541-73-1	1,3-Dichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
MOUND R2-E	TS	8/16/2007	07081113	000106-46-7	1,4-Dichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
MOUND R2-E	TS	8/16/2007	07081113	000071-43-2	Benzene	N001	1.9	ug/L	J	F	0.32		valid
MOUND R2-E	TS	8/16/2007	07081113	000075-27-4	Bromodichloromethane	N001	0.34	ug/L	U	F	0.34		valid
MOUND R2-E	TS	8/16/2007	07081113	000075-25-2	Bromoform	N001	0.38	ug/L	U	F	0.38		valid
MOUND R2-E	TS	8/16/2007	07081113	000074-83-9	Bromomethane	N001	0.42	ug/L	U	F	0.42		valid
MOUND R2-E	TS	8/16/2007	07081113	000056-23-5	Carbon tetrachloride	N001	0.38	ug/L	U	F	0.38		valid
MOUND R2-E	TS	8/16/2007	07081113	000108-90-7	Chlorobenzene	N001	0.34	ug/L	U	F	0.34		valid
MOUND R2-E	TS	8/16/2007	07081113	000124-48-1	Chlorodibromomethane	N001	0.34	ug/L	U	F	0.34		valid
MOUND R2-E	TS	8/16/2007	07081113	000067-66-3	Chloroform	N001	0.32	ug/L	U	F	0.32		valid
MOUND R2-E	TS	8/16/2007	07081113	000074-87-3	Chloromethane	N001	0.6	ug/L	U	F	0.6		valid
MOUND R2-E	TS	8/16/2007	07081113	000156-59-2	cis-1,2-Dichloroethene	N001	190	ug/L		F	1.5		valid
MOUND R2-E	TS	8/16/2007	07081113	000087-66-3	Hexachlorobutadiene	N001	0.24	ug/L	U	F	0.24		valid
MOUND R2-E	TS	8/16/2007	07081113	000075-09-2	Methylene chloride	N001	5.4	ug/L	B	F	0.64		U
MOUND R2-E	TS	8/16/2007	07081113	000091-20-3	Naphthalene	N001	0.44	ug/L	U	F	0.44		valid

## Appendix A

Analytical Results for Water Samples - Third Quarter of CY 2007

LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
MOUND R2-E	TS	8/16/2007	07081113	000100-42-5	Styrene	N001	0.34	ug/L	U	F	0.34		valid
MOUND R2-E	TS	8/16/2007	07081113	000127-18-4	Tetrachloroethene	N001	0.4	ug/L	U	F	0.4		valid
MOUND R2-E	TS	8/16/2007	07081113	000108-88-3	Toluene	N001	0.34	ug/L	U	F	0.34		valid
MOUND R2-E	TS	8/16/2007	07081113	000100-41-4	Total Xylene	N001	0.32	ug/L	U	F	0.32		valid
MOUND R2-E	TS	8/16/2007	07081113	001330-20-7	Total Xylenes	N001	0.38	ug/L	U	F	0.38		valid
MOUND R2-E	TS	8/16/2007	07081113	000156-60-5	trans-1,2-Dichloroethene	N001	0.3	ug/L	U	F	0.3		valid
MOUND R2-E	TS	8/16/2007	07081113	010061-02-6	trans-1,3-dichloropropene	N001	0.38	ug/L	U	F	0.38		valid
MOUND R2-E	TS	8/16/2007	07081113	000079-01-6	Trichloroethene	N001	0.32	ug/L	U	F	0.32		valid
MOUND R2-E	TS	8/16/2007	07081113	000075-01-4	Vinyl chloride	N001	34	ug/L	U	F	0.34		valid
OLFSEEP8	SL	8/23/2007	07081123	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
OLFSEEP8	SL	8/23/2007	07081123	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
OLFSEEP8	SL	8/23/2007	07081123	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
OLFSEEP8	SL	8/23/2007	07081123	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
OLFSEEP8	SL	8/23/2007	07081123	000095-94-3	1,2,4,5-Tetrachlorobenzene	N001	2	ug/L	U	F	2		valid
OLFSEEP8	SL	8/23/2007	07081123	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
OLFSEEP8	SL	8/23/2007	07081123	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
OLFSEEP8	SL	8/23/2007	07081123	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
OLFSEEP8	SL	8/23/2007	07081123	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
OLFSEEP8	SL	8/23/2007	07081123	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
OLFSEEP8	SL	8/23/2007	07081123	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
OLFSEEP8	SL	8/23/2007	07081123	000122-66-7	1,2-Diphenylhydrazine	N001	0.33	ug/L	U	F	0.33		valid
OLFSEEP8	SL	8/23/2007	07081123	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
OLFSEEP8	SL	8/23/2007	07081123	001006-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
OLFSEEP8	SL	8/23/2007	07081123	000105-67-9	2, 4-Dimethylphenol	N001	0.57	ug/L	U	F	0.57		valid
OLFSEEP8	SL	8/23/2007	07081123	000095-95-4	2,4,5-Trichlorophenol	N001	0.39	ug/L	U	F	0.39		valid
OLFSEEP8	SL	8/23/2007	07081123	000088-06-2	2,4,6-Trichlorophenol	N001	0.37	ug/L	U	F	0.37		valid
OLFSEEP8	SL	8/23/2007	07081123	000120-83-2	2,4-Dichlorophenol	N001	1.3	ug/L	U	F	1.3		valid
OLFSEEP8	SL	8/23/2007	07081123	000051-28-5	2,4-Dinitrophenol	N001	20	ug/L	U	F	20		valid
OLFSEEP8	SL	8/23/2007	07081123	000121-14-2	2,4-Dinitrotoluene	N001	0.25	ug/L	U	F	0.25		valid
OLFSEEP8	SL	8/23/2007	07081123	000606-20-2	2,6-Dinitrotoluene	N001	0.23	ug/L	U	F	0.23		valid
OLFSEEP8	SL	8/23/2007	07081123	000091-58-7	2-Chloronaphthalene	N001	0.31	ug/L	U	F	0.31		valid
OLFSEEP8	SL	8/23/2007	07081123	000095-57-8	2-Chlorophenol	N001	0.38	ug/L	U	F	0.38		valid
OLFSEEP8	SL	8/23/2007	07081123	000091-94-1	3,3'-Dichlorobenzidine	N001	2	ug/L	U	F	2		valid
OLFSEEP8	SL	8/23/2007	07081123	000534-52-1	4,6-Dinitro-2-methyl phenol	N001	0.35	ug/L	U	F	0.35		valid
OLFSEEP8	SL	8/23/2007	07081123	000059-50-7	4-Chloro-3-methylphenol	N001	2	ug/L	U	F	2		valid
OLFSEEP8	SL	8/23/2007	07081123	000100-02-7	4-Nitrophenol	N001	1.7	ug/L	U	F	1.7		valid
OLFSEEP8	SL	8/23/2007	07081123	000083-32-9	Acenaphthene	N001	0.28	ug/L	U	F	0.28		valid
OLFSEEP8	SL	8/23/2007	07081123	000107-02-8	Acrolein	N001	2.8	ug/L	U	F	2.8		valid
OLFSEEP8	SL	8/23/2007	07081123	000107-13-1	Acrylonitrile	N001	1.4	ug/L	U	F	1.4		valid
OLFSEEP8	SL	8/23/2007	07081123	000120-12-7	Anthracene	N001	0.42	ug/L	U	F	0.42		valid
OLFSEEP8	SL	8/23/2007	07081123	07440-38-2	Arsenic	N001	4.4	ug/L	U	F	4.4		valid
OLFSEEP8	SL	8/23/2007	07081123	000056-55-3	Benz(a)anthracene	N001	0.35	ug/L	U	F	0.35		valid
OLFSEEP8	SL	8/23/2007	07081123	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
OLFSEEP8	SL	8/23/2007	07081123	000092-87-5	Benzidine	N001	50	ug/L	U	F	50		valid
OLFSEEP8	SL	8/23/2007	07081123	000050-32-8	Benzo(a)pyrene	N001	0.74	ug/L	U	F	0.74		valid
OLFSEEP8	SL	8/23/2007	07081123	000205-99-2	Benzo(b)fluoranthene	N001	0.39	ug/L	U	F	0.39		valid
OLFSEEP8	SL	8/23/2007	07081123	000191-24-2	Benzo(g,h,i)Perylene	N001	0.5	ug/L	U	F	0.5		valid
OLFSEEP8	SL	8/23/2007	07081123	000207-08-9	Benzo(k)fluoranthene	N001	0.46	ug/L	U	F	0.46		valid
OLFSEEP8	SL	8/23/2007	07081123	07440-41-7	Beryllium	N001	0.47	ug/L	U	F	0.47		valid
OLFSEEP8	SL	8/23/2007	07081123	000111-44-4	Bis(2-chloroethyl) ether	N001	0.41	ug/L	U	F	0.41		valid
OLFSEEP8	SL	8/23/2007	07081123	000108-60-1	Bis(2-chloroisopropyl) ether	N001	0.43	ug/L	U	F	0.43		valid
OLFSEEP8	SL	8/23/2007	07081123	000117-81-7	Bis(2-ethylhexyl) phthalate	N001	0.56	ug/L	U	F	0.56		valid
OLFSEEP8	SL	8/23/2007	07081123	07440-42-8	Boron	N001	65	ug/L	U	F	5.9		valid
OLFSEEP8	SL	8/23/2007	07081123	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
OLFSEEP8	SL	8/23/2007	07081123	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
OLFSEEP8	SL	8/23/2007	07081123	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
OLFSEEP8	SL	8/23/2007	07081123	000085-68-7	Butyl benzyl phthalate	N001	1	ug/L	U	F	1		valid

Appendix A  
Analytical Results for Water Samples - Third Quarter of CY 2007

LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE_ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE_TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
OLFSEEP8	SL	8/23/2007	07081123	07440-43-9	Cadmium	N001	0.45	ug/L	U	F	0.45		valid
OLFSEEP8	SL	8/23/2007	07081123	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
OLFSEEP8	SL	8/23/2007	07081123	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
OLFSEEP8	SL	8/23/2007	07081123	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
OLFSEEP8	SL	8/23/2007	07081123	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
OLFSEEP8	SL	8/23/2007	07081123	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
OLFSEEP8	SL	8/23/2007	07081123	07440-47-3	Chromium	N001	2.6	ug/L	U	F	2.6		valid
OLFSEEP8	SL	8/23/2007	07081123	000218-01-9	Chrysene	N001	0.54	ug/L	U	F	0.54		valid
OLFSEEP8	SL	8/23/2007	07081123	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
OLFSEEP8	SL	8/23/2007	07081123	07440-50-8	Copper	N001	4.5	ug/L	U	F	4.5		valid
OLFSEEP8	SL	8/23/2007	07081123	000053-70-3	Dibenz(a,h)anthracene	N001	0.51	ug/L	U	F	0.51		valid
OLFSEEP8	SL	8/23/2007	07081123	000084-66-2	Diethyl phthalate	N001	0.38	ug/L	U	F	0.38		valid
OLFSEEP8	SL	8/23/2007	07081123	000131-11-3	Dimethyl phthalate	N001	1	ug/L	U	F	1		valid
OLFSEEP8	SL	8/23/2007	07081123	000084-74-2	Di-n-butyl phthalate	N001	1.2	ug/L	U	F	1.2		valid
OLFSEEP8	SL	8/23/2007	07081123	000206-44-0	Fluoranthene	N001	0.2	ug/L	U	F	0.2		valid
OLFSEEP8	SL	8/23/2007	07081123	000086-73-7	Fluorene	N001	0.31	ug/L	U	F	0.31		valid
OLFSEEP8	SL	8/23/2007	07081123	000118-74-1	Hexachlorobenzene	N001	0.66	ug/L	U	F	0.66		valid
OLFSEEP8	SL	8/23/2007	07081123	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
OLFSEEP8	SL	8/23/2007	07081123	000077-47-4	Hexachlorocyclopentadiene	N001	1.5	ug/L	U	F	1.5		valid
OLFSEEP8	SL	8/23/2007	07081123	000067-72-1	Hexachloroethane	N001	0.46	ug/L	U	F	0.46		valid
OLFSEEP8	SL	8/23/2007	07081123	000193-39-5	Indeno(1,2,3-cd)pyrene	N001	0.65	ug/L	U	F	0.65		valid
OLFSEEP8	SL	8/23/2007	07081123	000078-59-1	Isophorone	N001	0.21	ug/L	U	F	0.21		valid
OLFSEEP8	SL	8/23/2007	07081123	07439-92-1	Lead	N001	2.6	ug/L	U	F	2.6		valid
OLFSEEP8	SL	8/23/2007	07081123	M&P XYLINE	m,p-Xylene	N001	0.34	ug/L	U	F	0.34		valid
OLFSEEP8	SL	8/23/2007	07081123	07439-97-6	Mercury	N001	0.027	ug/L	U	F	0.027	R	
OLFSEEP8	SL	8/23/2007	07081123	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
OLFSEEP8	SL	8/23/2007	07081123	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
OLFSEEP8	SL	8/23/2007	07081123	07440-02-0	Nickel	N001	7.8	ug/L	U	F	7.8		valid
OLFSEEP8	SL	8/23/2007	07081123	000098-95-3	Nitrobenzene	N001	0.81	ug/L	U	F	0.81		valid
OLFSEEP8	SL	8/23/2007	07081123	000924-16-3	N-Nitrosodibutylamine	N001	2	ug/L	U	F	2		valid
OLFSEEP8	SL	8/23/2007	07081123	000055-18-5	N-Nitrosodiethylamine	N001	1.1	ug/L	U	F	1.1		valid
OLFSEEP8	SL	8/23/2007	07081123	000062-75-9	N-Nitrosodimethylamine	N001	0.29	ug/L	U	F	0.29		valid
OLFSEEP8	SL	8/23/2007	07081123	000621-64-7	N-Nitrosod-n-propylamine	N001	0.35	ug/L	U	F	0.35		valid
OLFSEEP8	SL	8/23/2007	07081123	000086-30-6	N-Nitrosodiphenylamine	N001	0.44	ug/L	U	F	0.44		valid
OLFSEEP8	SL	8/23/2007	07081123	000930-55-2	N-Nitrosopyrrolidine	N001	0.8	ug/L	U	F	0.8		valid
OLFSEEP8	SL	8/23/2007	07081123	000095-47-6	o-Xylene	N001	0.19	ug/L	U	F	0.19		valid
OLFSEEP8	SL	8/23/2007	07081123	000056-38-2	Parathion, ethyl	N001	2	ug/L	U	F	2		valid
OLFSEEP8	SL	8/23/2007	07081123	000608-93-5	Pentachlorobenzene	N001	2	ug/L	U	F	2		valid
OLFSEEP8	SL	8/23/2007	07081123	000087-86-5	Pentachlorophenol	N001	20	ug/L	U	F	20		valid
OLFSEEP8	SL	8/23/2007	07081123	001008-95-2	Phenol	N001	0.31	ug/L	U	F	0.31		valid
OLFSEEP8	SL	8/23/2007	07081123	000129-00-0	Pyrene	N001	0.37	ug/L	U	F	0.37		valid
OLFSEEP8	SL	8/23/2007	07081123	07782-49-2	Selenium	N001	4.9	ug/L	U	F	4.9		valid
OLFSEEP8	SL	8/23/2007	07081123	07440-22-4	Silver	N001	2.8	ug/L	U	F	2.8		valid
OLFSEEP8	SL	8/23/2007	07081123	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
OLFSEEP8	SL	8/23/2007	07081123	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
OLFSEEP8	SL	8/23/2007	07081123	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
OLFSEEP8	SL	8/23/2007	07081123	000100-41-4	Total Xylene	N001	0.16	ug/L	U	F	0.16		valid
OLFSEEP8	SL	8/23/2007	07081123	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
OLFSEEP8	SL	8/23/2007	07081123	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
OLFSEEP8	SL	8/23/2007	07081123	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
OLFSEEP8	SL	8/23/2007	07081123	07440-61-1	Uranium	N001	16	ug/L	U	F	16		valid
OLFSEEP8	SL	8/23/2007	07081123	07440-61-1	Uranium	N001	16	ug/L	U	F	16		valid
OLFSEEP8	SL	8/23/2007	07081123	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
OLFSEEP8	SL	8/23/2007	07081123	07440-66-6	Zinc	N001	9.7	ug/L	B	F	4.5		U
P210089	WL	8/29/2007	07091151	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
P210089	WL	8/29/2007	07091151	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
P210089	WL	8/29/2007	07091151	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid

## Appendix A

## Analytical Results for Water Samples - Third Quarter of CY 2007

LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
P210089	WL	8/29/2007	07091151	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
P210089	WL	8/29/2007	07091151	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
P210089	WL	8/29/2007	07091151	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
P210089	WL	8/29/2007	07091151	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
P210089	WL	8/29/2007	07091151	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
P210089	WL	8/29/2007	07091151	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
P210089	WL	8/29/2007	07091151	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
P210089	WL	8/29/2007	07091151	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
P210089	WL	8/29/2007	07091151	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
P210089	WL	8/29/2007	07091151	000107-02-8	Acrolein	N001	2.8	ug/L	U	F	2.8		valid
P210089	WL	8/29/2007	07091151	000107-13-1	Acrylonitrile	N001	1.4	ug/L	U	F	1.4		valid
P210089	WL	8/29/2007	07091151	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
P210089	WL	8/29/2007	07091151	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
P210089	WL	8/29/2007	07091151	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
P210089	WL	8/29/2007	07091151	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
P210089	WL	8/29/2007	07091151	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
P210089	WL	8/29/2007	07091151	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
P210089	WL	8/29/2007	07091151	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
P210089	WL	8/29/2007	07091151	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
P210089	WL	8/29/2007	07091151	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
P210089	WL	8/29/2007	07091151	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
P210089	WL	8/29/2007	07091151	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
P210089	WL	8/29/2007	07091151	M&P XYLENE	m,p-Xylene	N001	0.34	ug/L	U	F	0.34		valid
P210089	WL	8/29/2007	07091151	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
P210089	WL	8/29/2007	07091151	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
P210089	WL	8/29/2007	07091151	000095-47-6	o-Xylene	N001	0.19	ug/L	U	F	0.19		valid
P210089	WL	8/29/2007	07091151	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
P210089	WL	8/29/2007	07091151	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
P210089	WL	8/29/2007	07091151	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
P210089	WL	8/29/2007	07091151	000100-41-4	Total Xylene	N001	0.16	ug/L	U	F	0.16		valid
P210089	WL	8/29/2007	07091151	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
P210089	WL	8/29/2007	07091151	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
P210089	WL	8/29/2007	07091151	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
P210089	WL	8/29/2007	07091151	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
P416589	WL	9/4/2007	07091151	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
P416589	WL	9/4/2007	07091151	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
P416589	WL	9/4/2007	07091151	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
P416589	WL	9/4/2007	07091151	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
P416589	WL	9/4/2007	07091151	000095-94-3	1,2,4,5-Tetrachlorobenzene	N001	2	ug/L	U	F	2		valid
P416589	WL	9/4/2007	07091151	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
P416589	WL	9/4/2007	07091151	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
P416589	WL	9/4/2007	07091151	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
P416589	WL	9/4/2007	07091151	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
P416589	WL	9/4/2007	07091151	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
P416589	WL	9/4/2007	07091151	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
P416589	WL	9/4/2007	07091151	000122-66-7	1,2-Diphenylhydrazine	N001	0.33	ug/L	U	F	0.33		valid
P416589	WL	9/4/2007	07091151	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
P416589	WL	9/4/2007	07091151	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
P416589	WL	9/4/2007	07091151	000105-67-9	2, 4-Dimethylphenol	N001	0.57	ug/L	U	F	0.57		valid
P416589	WL	9/4/2007	07091151	000095-95-4	2,4,5-Trichlorophenol	N001	0.39	ug/L	U	F	0.39		valid
P416589	WL	9/4/2007	07091151	000088-06-2	2,4,6-Trichlorophenol	N001	0.37	ug/L	U	F	0.37		valid
P416589	WL	9/4/2007	07091151	000120-83-2	2,4-Dichlorophenol	N001	1.3	ug/L	U	F	1.3		valid
P416589	WL	9/4/2007	07091151	000051-28-5	2,4-Dinitrophenol	N001	20	ug/L	U	F	20		valid
P416589	WL	9/4/2007	07091151	000121-14-2	2,4-Dinitrotoluene	N001	0.25	ug/L	U	F	0.25		valid
P416589	WL	9/4/2007	07091151	000606-20-2	2,6-Dinitrotoluene	N001	0.23	ug/L	U	F	0.23		valid
P416589	WL	9/4/2007	07091151	000091-58-7	2-Chloronaphthalene	N001	0.31	ug/L	U	F	0.31		valid
P416589	WL	9/4/2007	07091151	000095-57-8	2-Chlorophenol	N001	0.38	ug/L	U	F	0.38		valid

## Appendix A

## Analytical Results for Water Samples - Third Quarter of CY 2007

LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
P416589	WL	9/4/2007	07091151	000091-94-1	3,3'-Dichlorobenzidine	N001	2	ug/L	U	F	2		valid
P416589	WL	9/4/2007	07091151	000534-52-1	4,6-Dinitro-2-methyl phenol	N001	0.35	ug/L	U	F	0.35		valid
P416589	WL	9/4/2007	07091151	000059-50-7	4-Chloro-3-methylphenol	N001	2	ug/L	U	F	2		valid
P416589	WL	9/4/2007	07091151	000100-02-7	4-Nitrophenol	N001	1.7	ug/L	U	F	1.7		valid
P416589	WL	9/4/2007	07091151	000083-32-9	Acenaphthene	N001	0.28	ug/L	U	F	0.28		valid
P416589	WL	9/4/2007	07091151	000107-02-8	Acrolein	N001	2.8	ug/L	U	F	2.8		valid
P416589	WL	9/4/2007	07091151	000107-13-1	Acrylonitrile	N001	1.4	ug/L	U	F	1.4		valid
P416589	WL	9/4/2007	07091151	000120-12-7	Anthracene	N001	0.42	ug/L	U	F	0.42		valid
P416589	WL	9/4/2007	07091151	000056-55-3	Benz(a)anthracene	N001	0.35	ug/L	U	F	0.35		valid
P416589	WL	9/4/2007	07091151	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
P416589	WL	9/4/2007	07091151	000092-87-5	Benzidine	N001	50	ug/L	U	F	50		valid
P416589	WL	9/4/2007	07091151	000050-32-8	Benzo(a)pyrene	N001	0.74	ug/L	U	F	0.74		valid
P416589	WL	9/4/2007	07091151	000205-99-2	Benzo(b)fluoranthene	N001	0.39	ug/L	U	F	0.39		valid
P416589	WL	9/4/2007	07091151	000191-24-2	Benzo(g,h,i)Perylene	N001	0.5	ug/L	U	F	0.5		valid
P416589	WL	9/4/2007	07091151	000207-08-9	Benzo(k)fluoranthene	N001	0.46	ug/L	U	F	0.46		valid
P416589	WL	9/4/2007	07091151	000111-44-4	Bis(2-chloroethyl) ether	N001	0.41	ug/L	U	F	0.41		valid
P416589	WL	9/4/2007	07091151	000108-60-1	Bis(2-chloroisopropyl) ether	N001	0.43	ug/L	U	F	0.43		valid
P416589	WL	9/4/2007	07091151	000117-81-7	Bis(2-ethylhexyl) phthalate	N001	0.56	ug/L	U	F	0.56		valid
P416589	WL	9/4/2007	07091151	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
P416589	WL	9/4/2007	07091151	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
P416589	WL	9/4/2007	07091151	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
P416589	WL	9/4/2007	07091151	000085-68-7	Butyl benzyl phthalate	N001	1	ug/L	U	F	1		valid
P416589	WL	9/4/2007	07091151	07440-43-9	Cadmium	N001	0.45	ug/L	U	F	0.45		valid
P416589	WL	9/4/2007	07091151	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
P416589	WL	9/4/2007	07091151	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
P416589	WL	9/4/2007	07091151	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
P416589	WL	9/4/2007	07091151	000067-66-3	Chloroform	N001	0.18	ug/L	J	F	0.16		valid
P416589	WL	9/4/2007	07091151	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
P416589	WL	9/4/2007	07091151	000218-01-9	Chrysene	N001	0.54	ug/L	U	F	0.54		valid
P416589	WL	9/4/2007	07091151	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
P416589	WL	9/4/2007	07091151	07440-50-8	Copper	N001	4.5	ug/L	U	F	4.5		valid
P416589	WL	9/4/2007	07091151	000053-70-3	Dibenz(a,h)anthracene	N001	0.51	ug/L	U	F	0.51		valid
P416589	WL	9/4/2007	07091151	000084-66-2	Diethyl phthalate	N001	0.38	ug/L	U	F	0.38		valid
P416589	WL	9/4/2007	07091151	000131-11-3	Dimethyl phthalate	N001	1	ug/L	U	F	1		valid
P416589	WL	9/4/2007	07091151	000084-74-2	Di-n-butyl phthalate	N001	1.2	ug/L	U	F	1.2		valid
P416589	WL	9/4/2007	07091151	000206-44-0	Fluoranthene	N001	0.2	ug/L	U	F	0.2		valid
P416589	WL	9/4/2007	07091151	000086-73-7	Fluorene	N001	0.31	ug/L	U	F	0.31		valid
P416589	WL	9/4/2007	07091151	000118-74-1	Hexachlorobenzene	N001	0.66	ug/L	U	F	0.66		valid
P416589	WL	9/4/2007	07091151	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
P416589	WL	9/4/2007	07091151	000077-47-4	Hexachlorocyclopentadiene	N001	1.5	ug/L	U	F	1.5		valid
P416589	WL	9/4/2007	07091151	000067-72-1	Hexachloroethane	N001	0.46	ug/L	U	F	0.46		valid
P416589	WL	9/4/2007	07091151	000193-39-5	Indeno(1,2,3-cd)pyrene	N001	0.65	ug/L	U	F	0.65		valid
P416589	WL	9/4/2007	07091151	000078-59-1	Isophorone	N001	0.21	ug/L	U	F	0.21		valid
P416589	WL	9/4/2007	07091151	07439-92-1	Lead	N001	2.6	ug/L	U	F	2.6		valid
P416589	WL	9/4/2007	07091151	M&P XYLENE	m,p-Xylene	N001	0.34	ug/L	U	F	0.34		valid
P416589	WL	9/4/2007	07091151	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
P416589	WL	9/4/2007	07091151	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
P416589	WL	9/4/2007	07091151	07440-02-0	Nickel	N001	7.8	ug/L	U	F	7.8		valid
P416589	WL	9/4/2007	07091151	000098-95-3	Nitrobenzene	N001	0.81	ug/L	U	F	0.81		valid
P416589	WL	9/4/2007	07091151	000924-16-3	N-Nitrosodibutylamine	N001	2	ug/L	U	F	2		valid
P416589	WL	9/4/2007	07091151	000055-18-5	N-Nitrosodiethylamine	N001	1.1	ug/L	U	F	1.1		valid
P416589	WL	9/4/2007	07091151	000062-75-9	N-Nitrosodimethylamine	N001	0.29	ug/L	U	F	0.29		valid
P416589	WL	9/4/2007	07091151	000621-64-7	N-Nitrosod-n-propylamine	N001	0.35	ug/L	U	F	0.35		valid
P416589	WL	9/4/2007	07091151	000086-30-6	N-Nitrosodiphenylamine	N001	0.44	ug/L	U	F	0.44		valid
P416589	WL	9/4/2007	07091151	000930-55-2	N-Nitrosopyrrolidine	N001	0.8	ug/L	U	F	0.8		valid
P416589	WL	9/4/2007	07091151	000095-47-6	o-Xylene	N001	0.19	ug/L	U	F	0.19		valid
P416589	WL	9/4/2007	07091151	000056-38-2	Parathion, ethyl	N001	2	ug/L	U	F	2		valid

## Appendix A

Analytical Results for Water Samples - Third Quarter of CY 2007

LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE_ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE_TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
P416589	WL	9/4/2007	07091151	000608-93-5	Pentachlorobenzene	N001	2	ug/L	U	F	2		valid
P416589	WL	9/4/2007	07091151	000087-86-5	Pentachlorophenol	N001	20	ug/L	U	F	20		valid
P416589	WL	9/4/2007	07091151	000108-95-2	Phenol	N001	0.31	ug/L	U	F	0.31		valid
P416589	WL	9/4/2007	07091151	000129-00-0	Pyrene	N001	0.37	ug/L	U	F	0.37		valid
P416589	WL	9/4/2007	07091151	07440-22-4	Silver	N001	2.8	ug/L	U	F	2.8		valid
P416589	WL	9/4/2007	07091151	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
P416589	WL	9/4/2007	07091151	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
P416589	WL	9/4/2007	07091151	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
P416589	WL	9/4/2007	07091151	000100-41-4	Total Xylene	N001	0.16	ug/L	U	F	0.16		valid
P416589	WL	9/4/2007	07091151	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
P416589	WL	9/4/2007	07091151	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
P416589	WL	9/4/2007	07091151	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
P416589	WL	9/4/2007	07091151	07440-61-1	Uranium	N001	16	ug/L	U	F	16		valid
P416589	WL	9/4/2007	07091151	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
P416589	WL	9/4/2007	07091151	07440-66-6	Zinc	N001	9.3	ug/L	B	F	4.5	U	
PLFPONDEFF	SL	9/6/2007	07091155	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
PLFPONDEFF	SL	9/6/2007	07091155	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
PLFPONDEFF	SL	9/6/2007	07091155	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
PLFPONDEFF	SL	9/6/2007	07091155	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
PLFPONDEFF	SL	9/6/2007	07091155	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
PLFPONDEFF	SL	9/6/2007	07091155	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
PLFPONDEFF	SL	9/6/2007	07091155	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
PLFPONDEFF	SL	9/6/2007	07091155	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
PLFPONDEFF	SL	9/6/2007	07091155	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
PLFPONDEFF	SL	9/6/2007	07091155	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
PLFPONDEFF	SL	9/6/2007	07091155	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
PLFPONDEFF	SL	9/6/2007	07091155	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
PLFPONDEFF	SL	9/6/2007	07091155	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
PLFPONDEFF	SL	9/6/2007	07091155	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
PLFPONDEFF	SL	9/6/2007	07091155	000075-25-2	Bromoform	N001	0.34	ug/L	J	F	0.19		valid
PLFPONDEFF	SL	9/6/2007	07091155	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
PLFPONDEFF	SL	9/6/2007	07091155	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
PLFPONDEFF	SL	9/6/2007	07091155	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
PLFPONDEFF	SL	9/6/2007	07091155	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
PLFPONDEFF	SL	9/6/2007	07091155	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
PLFPONDEFF	SL	9/6/2007	07091155	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
PLFPONDEFF	SL	9/6/2007	07091155	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
PLFPONDEFF	SL	9/6/2007	07091155	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
PLFPONDEFF	SL	9/6/2007	07091155	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
PLFPONDEFF	SL	9/6/2007	07091155	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
PLFPONDEFF	SL	9/6/2007	07091155	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
PLFPONDEFF	SL	9/6/2007	07091155	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
PLFPONDEFF	SL	9/6/2007	07091155	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
PLFPONDEFF	SL	9/6/2007	07091155	000100-41-4	Total Xylene	N001	0.16	ug/L	U	F	0.16		valid
PLFPONDEFF	SL	9/6/2007	07091155	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
PLFPONDEFF	SL	9/6/2007	07091155	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
PLFPONDEFF	SL	9/6/2007	07091155	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
PLFPONDEFF	SL	9/6/2007	07091155	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
PLFSEEPINF	TS	7/25/2007	07071047	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
PLFSEEPINF	TS	7/25/2007	07071047	000071-55-6	1,1,1-Trichloroethane	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000079-34-5	1,1,2,2-Tetrachloroethane	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000079-00-5	1,1,2-Trichloroethane	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000075-35-4	1,1-Dichloroethene	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000120-82-1	1,2,4-Trichlorobenzene	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000106-93-4	1,2-Dibromoethane	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000095-50-1	1,2-Dichlorobenzene	N001	1	ug/L	U	F	1		valid

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LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE_ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE_TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
PLFSEEPINF	TS	7/25/2007	07071047	000107-06-2	1,2-Dichloroethane	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000078-87-5	1,2-Dichloropropane	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000541-73-1	1,3-Dichlorobenzene	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000106-46-7	1,4-Dichlorobenzene	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000107-02-8	Acrolein	N001	5	ug/L	U	F	5		valid
PLFSEEPINF	TS	7/25/2007	07071047	000107-13-1	Acrylonitrile	N001	5	ug/L	U	F	5		valid
PLFSEEPINF	TS	7/25/2007	07071047	07440-38-2	Arsenic	N001	5	ug/L	U	F	5		valid
PLFSEEPINF	TS	7/25/2007	07071047	000071-43-2	Benzene	N001	1.73	ug/L		F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	07440-41-7	Beryllium	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	07440-42-8	Boron	N001	1600	ug/L		F	10		valid
PLFSEEPINF	TS	7/25/2007	07071047	000075-27-4	Bromodichloromethane	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000075-25-2	Bromoform	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000074-83-9	Bromomethane	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	07440-43-9	Cadmium	N003	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000056-23-5	Carbon tetrachloride	N001	1	ug/L	U	F	1.000		valid
PLFSEEPINF	TS	7/25/2007	07071047	000108-90-7	Chlorobenzene	N001	0.349	ug/L	J	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000124-48-1	Chlorodibromomethane	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000067-66-3	Chloroform	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000074-87-3	Chloromethane	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	07440-47-3	Chromium	N001	1.4	ug/L	B	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000156-59-2	cis-1,2-Dichloroethene	N001	1	ug/L	U	F	1.000		valid
PLFSEEPINF	TS	7/25/2007	07071047	07440-50-8	Copper	N003	3	ug/L	U	F	3		valid
PLFSEEPINF	TS	7/25/2007	07071047	000087-68-3	Hexachlorobutadiene	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	07439-92-1	Lead	N003	2.5	ug/L	U	F	2.5		valid
PLFSEEPINF	TS	7/25/2007	07071047	M&P XYLENE	m,p-Xylene	N001	1.79	ug/L	J	F	2		valid
PLFSEEPINF	TS	7/25/2007	07071047	07439-97-6	Mercury	N001	0.03	ug/L	UN	F	0.03	J	
PLFSEEPINF	TS	7/25/2007	07071047	000075-09-2	Methylene chloride	N001	5	ug/L	U	F	5		valid
PLFSEEPINF	TS	7/25/2007	07071047	000091-20-3	Naphthalene	N001	16.1	ug/L		F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	07440-02-0	Nickel	N003	5.1	ug/L	B	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000095-47-6	o-Xylene	N001	0.992	ug/L	J	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	07782-49-2	Selenium	N001	5	ug/L	U	F	5.000		valid
PLFSEEPINF	TS	7/25/2007	07071047	07440-22-4	Silver	N003	1	ug/L	U	F	1	J	
PLFSEEPINF	TS	7/25/2007	07071047	000100-42-5	Styrene	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000127-18-4	Tetrachloroethene	N001	1	ug/L	U	F	1.000		valid
PLFSEEPINF	TS	7/25/2007	07071047	000108-88-3	Toluene	N001	0.54	ug/L	J	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000100-41-4	Total Xylene	N001	1	ug/L	U	F	1.000		valid
PLFSEEPINF	TS	7/25/2007	07071047	000156-60-5	trans-1,2-Dichloroethene	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	010061-02-6	trans-1,3-dichloropropene	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	000079-01-6	Trichloroethene	N001	1	ug/L	U	F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	U-234	Uranium-234	N001	0.388	pCi/L		F	0.101	0.115	valid
PLFSEEPINF	TS	7/25/2007	07071047	U-235+236	Uranium-235/236	N001	-0.00856	pCi/L	U	F	0.135	0.029	valid
PLFSEEPINF	TS	7/25/2007	07071047	U-238	Uranium-238	N001	0.346	pCi/L		F	0.133	0.107	J
PLFSEEPINF	TS	7/25/2007	07071047	000075-01-4	Vinyl chloride	N001	1.11	ug/L		F	1		valid
PLFSEEPINF	TS	7/25/2007	07071047	07440-66-6	Zinc	N003	2	ug/L	U	F	2.000		valid
PLFSYSEFF	TS	7/25/2007	07071047	000071-55-6	1,1,1-Trichloroethane	N001	1	ug/L	U	F	1.000		valid
PLFSYSEFF	TS	7/25/2007	07071047	000079-34-5	1,1,2,2-Tetrachloroethane	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000079-00-5	1,1,2-Trichloroethane	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000075-35-4	1,1-Dichloroethene	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000095-94-3	1,2,4,5-Tetrachlorobenzene	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000120-82-1	1,2,4-Trichlorobenzene	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000106-93-4	1,2-Dibromoethane	N001	1	ug/L	U	F	1.000		valid
PLFSYSEFF	TS	7/25/2007	07071047	000095-50-1	1,2-Dichlorobenzene	N001	1	ug/L	U	F	1.000		valid
PLFSYSEFF	TS	7/25/2007	07071047	000107-06-2	1,2-Dichloroethane	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000078-87-5	1,2-Dichloropropane	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000122-66-7	1,2-Diphenylhydrazine	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000541-73-1	1,3-Dichlorobenzene	N001	1	ug/L	U	F	1		valid

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LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE_ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE_TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
PLFSYSEFF	TS	7/25/2007	07071047	000106-46-7	1,4-Dichlorobenzene	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000105-67-9	2, 4-Dimethylphenol	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000095-95-4	2,4,5-Trichlorophenol	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000088-06-2	2,4,6-Trichlorophenol	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000120-83-2	2,4-Dichlorophenol	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000051-28-5	2,4-Dinitrophenol	N001	21.5	ug/L	U	F	21.5		valid
PLFSYSEFF	TS	7/25/2007	07071047	000121-14-2	2,4-Dinitrotoluene	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000606-20-2	2,6-Dinitrotoluene	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000091-58-7	2-Chloronaphthalene	N001	1.08	ug/L	U	F	1.08		valid
PLFSYSEFF	TS	7/25/2007	07071047	000095-57-8	2-Chlorophenol	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000091-94-1	3,3'-Dichlorobenzidine	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000534-52-1	4,6-Dinitro-2-methyl phenol	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000059-50-7	4-Chloro-3-methylphenol	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000100-02-7	4-Nitrophenol	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000083-32-9	Acenaphthene	N001	2.06	ug/L	J	F	1.08		valid
PLFSYSEFF	TS	7/25/2007	07071047	000107-02-8	Acrolein	N001	5	ug/L	U	F	5		valid
PLFSYSEFF	TS	7/25/2007	07071047	000107-13-1	Acrylonitrile	N001	5	ug/L	U	F	5		valid
PLFSYSEFF	TS	7/25/2007	07071047	000120-12-7	Anthracene	N001	0.286	ug/L	J	F	1.08		valid
PLFSYSEFF	TS	7/25/2007	07071047	07440-38-2	Arsenic	N001	7.8	ug/L	B	F	5	J	
PLFSYSEFF	TS	7/25/2007	07071047	000056-55-3	Benz(a)anthracene	N001	1.08	ug/L	U	F	1.08		valid
PLFSYSEFF	TS	7/25/2007	07071047	000071-43-2	Benzene	N001	0.97	ug/L	J	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000092-87-5	Benzidine	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000050-32-8	Benzo(a)pyrene	N001	1.08	ug/L	U	F	1.08		valid
PLFSYSEFF	TS	7/25/2007	07071047	000205-99-2	Benzo(b)fluoranthene	N001	1.08	ug/L	U	F	1.08		valid
PLFSYSEFF	TS	7/25/2007	07071047	000191-24-2	Benzo(g,h,i)Perylene	N001	1.08	ug/L	U	F	1.08		valid
PLFSYSEFF	TS	7/25/2007	07071047	000207-08-9	Benzo(k)fluoranthene	N001	1.08	ug/L	U	F	1.08		valid
PLFSYSEFF	TS	7/25/2007	07071047	07440-41-7	Beryllium	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000111-44-4	Bis(2-chloroethyl) ether	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000108-60-1	Bis(2-chloroisopropyl) ether	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000117-81-7	Bis(2-ethylhexyl) phthalate	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	07440-42-8	Boron	N001	1320	ug/L	U	F	10		valid
PLFSYSEFF	TS	7/25/2007	07071047	000075-27-4	Bromodichloromethane	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000075-25-2	Bromoform	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000074-83-9	Bromomethane	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000085-68-7	Butyl benzyl phthalate	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	07440-43-9	Cadmium	N003	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000056-23-5	Carbon tetrachloride	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000108-90-7	Chlorobenzene	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000124-48-1	Chlorodibromomethane	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000067-66-3	Chloroform	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000074-87-3	Chloromethane	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	07440-47-3	Chromium	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000218-01-9	Chrysene	N001	1.08	ug/L	U	F	1.08		valid
PLFSYSEFF	TS	7/25/2007	07071047	000156-59-2	cis-1,2-Dichloroethene	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	07440-50-8	Copper	N003	3	ug/L	U	F	3		valid
PLFSYSEFF	TS	7/25/2007	07071047	000053-70-3	Dibenz(a,h)anthracene	N001	1.08	ug/L	U	F	1.08		valid
PLFSYSEFF	TS	7/25/2007	07071047	000084-66-2	Diethyl phthalate	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000131-11-3	Dimethyl phthalate	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000084-74-2	Di-n-butyl phthalate	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000206-44-0	Fluoranthene	N001	0.278	ug/L	J	F	1.08		valid
PLFSYSEFF	TS	7/25/2007	07071047	000086-73-7	Fluorene	N001	1.46	ug/L	J	F	1.08		valid
PLFSYSEFF	TS	7/25/2007	07071047	000118-74-1	Hexachlorobenzene	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000087-68-3	Hexachlorobutadiene	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000077-47-4	Hexachlorocyclopentadiene	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000067-72-1	Hexachloroethane	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000193-39-5	Indeno(1,2,3-cd)pyrene	N001	1.08	ug/L	U	F	1.08		valid
PLFSYSEFF	TS	7/25/2007	07071047	000078-59-1	Isophorone	N001	10.8	ug/L	U	F	10.8		valid

## Appendix A

## Analytical Results for Water Samples - Third Quarter of CY 2007

LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE_ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE_TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
PLFSYSEFF	TS	7/25/2007	07071047	07439-92-1	Lead	N003	2.5	ug/L	U	F	2.5		valid
PLFSYSEFF	TS	7/25/2007	07071047	M&P XYLENE	m,p-Xylene	N001	0.925	ug/L	J	F	2		valid
PLFSYSEFF	TS	7/25/2007	07071047	07439-97-6	Mercury	N001	0.03	ug/L	UN	F	0.03		J
PLFSYSEFF	TS	7/25/2007	07071047	000075-09-2	Methylene chloride	N001	5	ug/L	U	F	5		valid
PLFSYSEFF	TS	7/25/2007	07071047	000091-20-3	Naphthalene	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	07440-02-0	Nickel	N003	6.8	ug/L	B	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000098-95-3	Nitrobenzene	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000924-16-3	N-Nitrosodibutylamine	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000055-18-5	N-Nitrosodiethylamine	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000062-75-9	N-Nitrosodimethylamine	N001	10.8	ug/L	U	F	10.800		valid
PLFSYSEFF	TS	7/25/2007	07071047	000621-64-7	N-Nitrosod-n-propylamine	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000930-55-2	N-Nitrosopyrrolidine	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000095-47-6	o-Xylene	N001	0.502	ug/L	J	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000056-38-2	Parathion, ethyl	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000608-93-5	Pentachlorobenzene	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000087-86-5	Pentachlorophenol	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000108-95-2	Phenol	N001	10.8	ug/L	U	F	10.8		valid
PLFSYSEFF	TS	7/25/2007	07071047	000129-00-0	Pyrene	N001	1.08	ug/L	U	F	1.08		valid
PLFSYSEFF	TS	7/25/2007	07071047	07782-49-2	Selenium	N001	5	ug/L	U	F	5		valid
PLFSYSEFF	TS	7/25/2007	07071047	07440-22-4	Silver	N003	1	ug/L	U	F	1		J
PLFSYSEFF	TS	7/25/2007	07071047	000100-42-5	Styrene	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000127-18-4	Tetrachloroethene	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000108-88-3	Toluene	N001	0.436	ug/L	J	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000100-41-4	Total Xylene	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000156-60-5	trans-1,2-Dichloroethene	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	010061-02-6	trans-1,3-dichloropropene	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	000079-01-6	Trichloroethene	N001	1	ug/L	U	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	U-234	Uranium-234	N001	0.757	pCi/L		F	0.104	0.164	valid
PLFSYSEFF	TS	7/25/2007	07071047	U-235+236	Uranium-235/236	N001	0.0177	pCi/L	U	F	0.139	0.0245	valid
PLFSYSEFF	TS	7/25/2007	07071047	U-238	Uranium-238	N001	0.643	pCi/L		F	0.138	0.151	valid
PLFSYSEFF	TS	7/25/2007	07071047	000075-01-4	Vinyl chloride	N001	0.888	ug/L	J	F	1		valid
PLFSYSEFF	TS	7/25/2007	07071047	07440-66-6	Zinc	N003	3	ug/L	B	F	2		U
PLFSYSEFF	TS	8/31/2007	07081137	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		J
PLFSYSEFF	TS	8/31/2007	07081137	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		J
PLFSYSEFF	TS	8/31/2007	07081137	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		J
PLFSYSEFF	TS	8/31/2007	07081137	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		J
PLFSYSEFF	TS	8/31/2007	07081137	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.320		J
PLFSYSEFF	TS	8/31/2007	07081137	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		J
PLFSYSEFF	TS	8/31/2007	07081137	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		J
PLFSYSEFF	TS	8/31/2007	07081137	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		J
PLFSYSEFF	TS	8/31/2007	07081137	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		J
PLFSYSEFF	TS	8/31/2007	07081137	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		J
PLFSYSEFF	TS	8/31/2007	07081137	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		J
PLFSYSEFF	TS	8/31/2007	07081137	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		J
PLFSYSEFF	TS	8/31/2007	07081137	000071-43-2	Benzene	N001	0.93	ug/L	J	F	0.16		J
PLFSYSEFF	TS	8/31/2007	07081137	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		J
PLFSYSEFF	TS	8/31/2007	07081137	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		J
PLFSYSEFF	TS	8/31/2007	07081137	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		J
PLFSYSEFF	TS	8/31/2007	07081137	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		J
PLFSYSEFF	TS	8/31/2007	07081137	000108-90-7	Chlorobenzene	N001	0.18	ug/L	J	F	0.17		J
PLFSYSEFF	TS	8/31/2007	07081137	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		J
PLFSYSEFF	TS	8/31/2007	07081137	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		J
PLFSYSEFF	TS	8/31/2007	07081137	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		J
PLFSYSEFF	TS	8/31/2007	07081137	000156-59-2	cis-1,2-Dichloroethene	N001	0.19	ug/L	J	F	0.15		J
PLFSYSEFF	TS	8/31/2007	07081137	000087-66-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		J
PLFSYSEFF	TS	8/31/2007	07081137	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		J
PLFSYSEFF	TS	8/31/2007	07081137	000091-20-3	Naphthalene	N001	7	ug/L		F	0.22		J

Appendix A  
Analytical Results for Water Samples - Third Quarter of CY 2007

LOCATION_CODE	LOCATION_TYPE	DATE_SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE_ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE_TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
PLFSYSEFF	TS	8/31/2007	07081137	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17	J	
PLFSYSEFF	TS	8/31/2007	07081137	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2	J	
PLFSYSEFF	TS	8/31/2007	07081137	000108-88-3	Toluene	N001	0.29	ug/L	J	F	0.17	J	
PLFSYSEFF	TS	8/31/2007	07081137	000100-41-4	Total Xylene	N001	0.16	ug/L	U	F	0.16	J	
PLFSYSEFF	TS	8/31/2007	07081137	001330-20-7	Total Xylenes	N001	1.6	ug/L		F	0.19	J	
PLFSYSEFF	TS	8/31/2007	07081137	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15	J	
PLFSYSEFF	TS	8/31/2007	07081137	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19	J	
PLFSYSEFF	TS	8/31/2007	07081137	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16	J	
PLFSYSEFF	TS	8/31/2007	07081137	000075-01-4	Vinyl chloride	N001	0.61	ug/L	J	F	0.17	valid	
SPIN	TS	7/16/2007	07071018	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	270	mg/L		F	1.9	valid	
SPIN	TS	7/16/2007	07071018	07440-61-1	Uranium	0001	63	ug/L		F	0.02	valid	
SPIN	TS	7/16/2007	07071018	07440-61-1	Uranium	N001	62	ug/L		F	0.02	valid	
SPPDISCHARGE GALLERY	TS	7/16/2007	07071018	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	520	mg/L		F	9.6	valid	
SPPDISCHARGE GALLERY	TS	7/16/2007	07071018	07440-61-1	Uranium	N001	74	ug/L		F	0.02	valid	
SPPMM01	TS	7/16/2007	07071018	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.028	mg/L	B	F	0.019	J	
SPPMM01	TS	7/16/2007	07071018	07440-61-1	Uranium	0001	0.34	ug/L		F	0.02	valid	
SPPMM01	TS	7/16/2007	07071018	07440-61-1	Uranium	N001	0.36	ug/L		F	0.02	valid	
SW018	SL	7/5/2007	07101235	AM-241	Americium-241	N001	0.00577	pCi/L	U	F	0.0226	0.0111	valid
SW018	SL	7/5/2007	07101235	PU-239,240	Plutonium-239, 240	N001	-0.00687	pCi/L	U	F	0.0191	0.0078	valid
SW093	SL	7/19/2007	07091158	AM-241	Americium-241	N001	0.0147	pCi/L	U	F	0.0259	0.0154	valid
SW093	SL	7/19/2007	07091158	07440-41-7	Beryllium	N001	1	ug/L	U	F	1	valid	
SW093	SL	7/19/2007	07091158	07440-43-9	Cadmium	0001	0.11	ug/L	U	F	0.11	valid	
SW093	SL	7/19/2007	07091158	07440-47-3	Chromium	N001	2.7	ug/L	B	F	1	valid	
SW093	SL	7/19/2007	07091158	HARDNESS	Hardness	N001	636	mg/L		F	4	valid	
SW093	SL	7/19/2007	07091158	PU-239,240	Plutonium-239, 240	N001	0.0492	pCi/L		F	0.0262	0.0167	J
SW093	SL	7/19/2007	07091158	07440-22-4	Silver	0001	0.2	ug/L	U	F	0.2	valid	
SW093	SL	7/19/2007	07091158	U-234	Uranium-234	N001	4.5	pCi/L		F	0.0896	0.668	valid
SW093	SL	7/19/2007	07091158	U-235+236	Uranium-235/236	N001	0.256	pCi/L		F	0.0642	0.0758	valid
SW093	SL	7/19/2007	07091158	U-238	Uranium-238	N001	3.98	pCi/L		F	0.0709	0.597	valid
SW093	SL	8/9/2007	07091158	AM-241	Americium-241	N001	0.049	pCi/L		F	0.0399	0.0204	J
SW093	SL	8/9/2007	07091158	07440-41-7	Beryllium	N001	1	ug/L	U	F	1	valid	
SW093	SL	8/9/2007	07091158	07440-43-9	Cadmium	0001	0.11	ug/L	U	F	0.11	valid	
SW093	SL	8/9/2007	07091158	07440-47-3	Chromium	N001	1.2	ug/L	B	F	1	valid	
SW093	SL	8/9/2007	07091158	HARDNESS	Hardness	N001	581	mg/L		F	2	valid	
SW093	SL	8/9/2007	07091158	PU-239,240	Plutonium-239, 240	N001	0.288	pCi/L		F	0.024	0.0459	valid
SW093	SL	8/9/2007	07091158	07440-22-4	Silver	0001	0.2	ug/L	U	F	0.2	valid	
SW093	SL	8/9/2007	07091158	U-234	Uranium-234	N001	3.95	pCi/L		F	0.0367	0.493	valid
SW093	SL	8/9/2007	07091158	U-235+236	Uranium-235/236	N001	0.204	pCi/L		F	0.0263	0.0453	valid
SW093	SL	8/9/2007	07091158	U-238	Uranium-238	N001	3.29	pCi/L		F	0.029	0.414	valid
SW093	SL	8/27/2007	07101196	AM-241	Americium-241	N001	0.000171	pCi/L	U	F	0.0298	0.0112	valid
SW093	SL	8/27/2007	07101196	07440-41-7	Beryllium	N001	1	ug/L	U	F	1	valid	
SW093	SL	8/27/2007	07101196	07440-43-9	Cadmium	0001	0.11	ug/L	U	F	0.11	valid	
SW093	SL	8/27/2007	07101196	07440-47-3	Chromium	N001	1.1	ug/L	B	F	1	valid	
SW093	SL	8/27/2007	07101196	HARDNESS	Hardness	N001	553	mg/L		F	2	valid	
SW093	SL	8/27/2007	07101196	PU-239,240	Plutonium-239, 240	N001	-0.0136	pCi/L	U	F	0.02	0.0107	valid
SW093	SL	8/27/2007	07101196	07440-22-4	Silver	0001	0.2	ug/L	U	F	0.2	valid	
SW093	SL	8/27/2007	07101196	U-234	Uranium-234	N001	4.3	pCi/L		F	0.0715	0.524	valid
SW093	SL	8/27/2007	07101196	U-235+236	Uranium-235/236	N001	0.305	pCi/L		F	0.0558	0.0759	valid
SW093	SL	8/27/2007	07101196	U-238	Uranium-238	N001	3.59	pCi/L		F	0.0627	0.445	valid

## EXPLANATION

### **SAMPLE\_ID**

N00x = Sample was not filtered.  
000x = Sample was filtered.

### **WATER\_UNIT\_OF\_MEASURE**

mg/L; ppm = milligrams per liter  
pCi/L = picocuries per liter  
ug/L = micrograms per liter  
C = degrees celsius  
mS/cm = millSiemens per centimeter  
NTU = normal turbidity units  
s.u. = standard pH units  
uS/cm = microSiemens per centimeter  
umhos/cm = microSiemens per centimeter

### **SAMPLE\_TYPE**

F = Field Sample  
D = Duplicate

### **DATA\_VALIDATION\_QUALIFIERS**

valid	Result is valid.
F	Low flow sampling method used.
G	Possible grout contamination, pH > 9.
J	Estimated value.
L	Less than 3 bore volumes purged prior to sampling.
Q	Qualitative result due to sampling technique
R	Unusable result.
U	Parameter analyzed for but was not detected.
X	Location is undefined.
999	Validation not complete

### **LAB\_QUALIFIERS**

*	Replicate analysis not within control limits.
+	Correlation coefficient for MSA < 0.995.
>	Result above upper detection limit.
A	TIC is a suspected aldol-condensation product.
B	Inorganic: Result is between the IDL and CRDL. Organic & Radiochemistry: Analyte also found in method blank.
C	Pesticide result confirmed by GC-MS.
D	Analyte determined in diluted sample.
E	Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
H	Holding time expired, value suspect.
I	Increased detection limit due to required dilution.
J	Estimated
M	GFAA duplicate injection precision not met.
N	Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
P	> 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
S	Result determined by method of standard addition (MSA).
U	Analytical result below detection limit.
W	Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
X	Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
Y	Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
Z	Laboratory defined (USEPA CLP organic) qualifier, see case narrative.

### **LOCATION\_TYPE**

SL	SURFACE LOCATION
TS	TREATMENT SYSTEM
WL	WELL

## **Appendix B**

### **Information for Composite Samples With Unavailable Data**

*Appendix B*  
*Information for Composite Samples with Unavailable Data*

Location	Sample Dates*	Status
GS01	6/20/2007 10:00 -->	In progress
GS03	7/30/07 11:06 -->	In progress
GS13	7/30 11:55 - 11/8/07 8:50	Analysis pending
SW027	4/26/07 11:41 ->	In progress

\* Analytical results are reported with the start date of the composite sampling period

> Composite sample end date to be determined

NSQ: non-sufficient quantity for analysis

**Appendix C**

**Landfill Inspection Forms**

# ORIGINAL LANDFILL – MONITORING AND MAINTENANCE PROGRAM

## INSPECTION FORM

INSPECTOR: Jeremiah McLaughlin DATE: 7/25/07 TIME: 1300 REVIEWED BY: Joye Sauer

TEMPERATURE: 90°F WEATHER CONDITIONS: Sunny & hot! REVIEW DATE: 7-26-07

METEOROLOGICAL STATION LOCATION: NREL Wind Site

### SUBSIDENCE / CONSOLIDATION

REGION	EVIDENCE OF CRACKS?	EVIDENCE OF DEPRESSIONS?	EVIDENCE OF SINK HOLES?	EVIDENCE OF PONDING?	OTHER (DESCRIBE BELOW)
COVER - WEST	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Berm #1 Slump
COVER - EAST	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Berm #4 Depression
BUTTRESS FILL	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-			
DIVERSION BERM 1	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Berm #1 Slump crack
DIVERSION BERM 2	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Berm has a low spot from Slump
DIVERSION BERM 3	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-			
DIVERSION BERM 4	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2 low spots in middle of berm
DIVERSION BERM 5	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Low spot from depression
DIVERSION BERM 6	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-			
DIVERSION BERM 7	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Cracks from Slump in east perimeter channel

Settlement Plates on Top of cover to be inspected for integrity.

During Year 1, they will be surveyed quarterly, and annually thereafter.

Integrity intact?

Yes  No

### MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

The berm #1 Slump area is going to be re-graded and have the cracks filled and compacted. This project will begin on July 30th and is expected to be completed by August 3rd.

## SLOPE STABILITY

Region	Evidence of Cracks?	Evidence of Block or Circular Failure?	Evidence of Seeps?	Other? (Describe below)
COVER - WEST	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Berm #1 Slump
COVER - EAST	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Berm #4 depression
BUTTRESS FILL SIDESLOPE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-
WEST PERIMETER CHANNEL SIDESLOPES	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	WPL Slump
EAST PERIMETER CHANNEL SIDESLOPES	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Berm #7 Slump
COVER SEEPS (IF PRESENT)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Berm #1 + #7 Slumps

### MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

The landfill is very dry. There are no new problems since the last inspection.

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## SOIL COVER

REGION	EVIDENCE OF SOIL DEPOSITION OR EROSION?	EVIDENCE OF EROSION RILLS/GULLIES?	EVIDENCE OF BURROWING ANIMALS?	OTHER (DESCRIBE BELOW)
COVER - WEST	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Erosion from crack in berm #1
COVER - EAST	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-
BUTTRESS FILL	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-
BUTTRESS FILL SIDESLOPE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-

### MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

The berm #1 crack will be Fixed starting July 30th.

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OLF Veg Survey 7/11/07

Linda K Nelson

## VEGETATION

REGION	CONDITION OF GRASS	UNWANTED VEGETATION PRESENT?	PERCENTAGE OF GRASS VERSUS BARE GROUND?	PERCENTAGE OF UNWANTED VEGETATION?
COVER - WEST	none to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0-80%	CEDII, VETII <1%
COVER - EAST	none to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0-60%	CEDII, SAIBI, KOSCI COARI, CANOI VETII, CEDII, SAIBI, CIARI <1%
DIVERSION BERM 1	none to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0-80%	VETII, CEDII, SAIBI, CIARI <1%
DIVERSION BERM 2	none to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0-70%	KOSCI, CEDII, SAIBI, CIARI <1%
DIVERSION BERM 3	Spars to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0-60%	KOSCI, SAIBI, CEDII <1%
DIVERSION BERM 4	Spars to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0-40%	CEDII, SAIBI, KOSCI <1%
DIVERSION BERM 5	Spars to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0-60%	CEDII, SAIBI, COARI <1%
DIVERSION BERM 6	Spars to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0-50%	CEDII, KOSCI, HYPEI, SAIBI, CANOI <1%
DIVERSION BERM 7	Spars to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0-50%	CEDII, SAIBI <1%
WEST PERIMETER CHANNEL	Spars to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5-90%	CEDII, SAIBI, KOSCI, BETEI, CIARI <1%
EAST PERIMETER CHANNEL	none to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0-90%	SOARI, SAIBI, COARI CIARI <1%
UPPER BUTTRESS FILL SIDESLOPE	none to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0-50%	CEDII, CANOI, SAIBI, HYPEI, VETII <1%
LOWER BUTTRESS FILL SIDESLOPE	Spars to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0-90%	CEDII, VETII, BETEI, HATI, CIARI sprayed - June 07 29.

\* Unwanted vegetation includes weeds and deep-rooting trees.

## MAINTENANCE REQUIRED / COMMENTS

Honey Locust tree growing on east end between Berms 4+5 just N of 15' wall - cut off at base  
 Standing, iron colored water at seep on east end, south side of Berm 5  
 Elk are tearing up some small areas on the top of Berm 7 on the east end (and a few of the seep/wet areas elsewhere - lots of footprints)

JFKM 7/11/07

## STORMWATER MANAGEMENT STRUCTURES

### CHANNELS / LINING

STRUCTURE	EVIDENCE OF EXCESSIVE EROSION, GULLYING, SCOUR, OR UNDERMINING?	EVIDENCE OF SETTLEMENT/ SUBSIDENCE OR DEPRESSIONS?	EVIDENCE OF BREACHING OR BANK FAILURE?	EVIDENCE OF BURROWING ANIMALS?	EVIDENCE OF SEDIMENT BUILD-UP OR OTHER BLOCKAGE?	EVIDENCE OF LINING DETERIORATION, HOLES, RIPS, OR SEPARATION?	EVIDENCE OF LINING DISPLACEMENT?
DIVERSION BERM 1	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
DIVERSION BERM 2	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
DIVERSION BERM 3	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
DIVERSION BERM 4	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
DIVERSION BERM 5	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
DIVERSION BERM 6	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
DIVERSION BERM 7	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
CHECK DAMS	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
WEST PERIMETER CHANNEL	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
EAST PERIMETER CHANNEL	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

OTHER DEFICIENCIES?

None

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

The lining (erosion matting) separation will be fitted in the berm #1 re-grade project.

## STORMWATER MANAGEMENT STRUCTURES (CONTINUED)

### OUTFALLS

CHECK EACH STRUCTURE FOR EXCESSIVE EROSION AND SEDIMENT DEPTH. IF SEDIMENT DEPTH IS COMPROMISING THE DESIGN CHARACTERISTICS, REMOVE SEDIMENT.

STRUCTURE	CONDITION / SEDIMENT DEPTH
DIVERSION BERM OUTFALL 1	Good / Minimal Sediment
DIVERSION BERM OUTFALL 2	Good / Minimal Sediment
DIVERSION BERM OUTFALL 3	Fair / WPC slump is pushing into the outfall
DIVERSION BERM OUTFALL 4	Good / Minimal sediment
DIVERSION BERM OUTFALL 5	Good / Minimal Sediment
DIVERSION BERM OUTFALL 6	Good / Minimal Sediment
DIVERSION BERM OUTFALL 7	Fair / End of berm is sliding into EPC => still functioning
WEST PERIMETER CHANNEL OUTFALL	Good / Minimal Sediment
EAST PERIMETER CHANNEL OUTFALL	Good / Minimal sediment
FRENCH DRAIN OUTFALL (SID)	Good / Minimal sediment

OTHER DEFICIENCIES?

None

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

None

**"RUN-ON" CONTROL**

AREA	ADVERSELY AFFECTING OLF?		
NORTH OF THE ORIGINAL LANDFILL	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
WEST OF THE WEST PERIMETER CHANNEL	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
EAST OF THE EAST PERIMETER CHANNEL	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
NORTH OF WOMAN CREEK	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —

MAINTENANCE REQUIRED

*None*

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## INSTITUTIONAL CONTROLS

ITEM			COMMENT:
EVIDENCE OF EXCAVATION(S) OF COVER AND IMMEDIATE VICINITY OF COVER?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Planted = 100 plugs in Seep #7 Area Installation of Settlement Monument "D"
EVIDENCE OF CONSTRUCTION OF ROADS, TRAILS ON COVER OR BUILDINGS?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	n/a
EVIDENCE OF UNAUTHORIZED ENTRY?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	n/a
EVIDENCE OF DRILLING OF WELLS OR USE OF GROUNDWATER?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	n/a
DAMAGE OR REMOVAL OF ANY SIGNAGE OR GROUNDWATER MONITORING WELLS?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	n/a

### OTHER DEFICIENCIES/PHOTO LOG

*None*

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## ACTION ITEMS

**INSPECTOR SIGNATURE:**

DATE: 7/26/07

**REVIEWER SIGNATURE:**

DATE: 7-26-07

# ORIGINAL LANDFILL – MONITORING AND MAINTENANCE PROGRAM

## INSPECTION FORM

INSPECTOR: J. McLaughlin

DATE: 8/27/02 TIME: 1000 REVIEWED BY: Joe Sennell

TEMPERATURE: 88°F WEATHER CONDITIONS: P. Cloudy REVIEW DATE: 8/27/02

METEOROLOGICAL STATION LOCATION: NREL Wind Site

### SUBSIDENCE / CONSOLIDATION

REGION	EVIDENCE OF CRACKS?	EVIDENCE OF DEPRESSIONS?	EVIDENCE OF SINK HOLES?	EVIDENCE OF PONDING?	OTHER (DESCRIBE BELOW)
COVER – WEST	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>WPC Slump</u>
COVER – EAST	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>Berm #4 depression</u>
BUTTRESS FILL	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
DIVERSION BERM 1	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
DIVERSION BERM 2	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
DIVERSION BERM 3	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
DIVERSION BERM 4	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>Berm #4 depression</u>
DIVERSION BERM 5	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>Berm #4 depression</u>
DIVERSION BERM 6	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
DIVERSION BERM 7	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>Cracks from EPC Slump</u>

Settlement Plates on Top of cover to be inspected for integrity.

During Year 1, they will be surveyed quarterly, and annually thereafter.

Integrity intact?

Yes  No

### MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

Berm #1 Slump was re-graded from July 30th - August 2nd. The cracks between berms #1 and #3 were also filled and compacted.

## SLOPE STABILITY

Region	Evidence of Cracks?	Evidence of Block or Circular Failure?	Evidence of Seeps?	Other? (Describe below)
COVER - WEST	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Seep #7 + #4
COVER - EAST	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Seep #2
BUTTRESS FILL SIDESLOPE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-
WEST PERIMETER CHANNEL SIDESLOPES	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	WPC Slump
EAST PERIMETER CHANNEL SIDESLOPES	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	EPC Slump (down #7)
COVER SEEPS (IF PRESENT)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	See below

### MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

Seeps #4 + #7 have dried out considerably but continue to flow. Seeps #1 + #2 only flow after a precipitation event. The area of these seeps is otherwise fairly dry with no flow. Seep #8 on the south east side of the landfill below the buttress continues to flow.

## SOIL COVER

REGION	EVIDENCE OF SOIL DEPOSITION OR EROSION?	EVIDENCE OF EROSION RILLS/GULLIES?	EVIDENCE OF BURROWING ANIMALS?	OTHER (DESCRIBE BELOW)
COVER - WEST	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Small amount of erosion in trough of berm #3
COVER - EAST	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-
BUTTRESS FILL	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-
BUTTRESS FILL SIDESLOPE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-

### MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

The erosion in the trough of berm #3 is from the water flowing from Scraps #7 + #4. It is negligible and requires no maintenance at this time.

## OLF Veg Survey 8/8/07

Larry K Nelson

## VEGETATION

REGION	CONDITION OF GRASS	UNWANTED VEGETATION PRESENT?	PERCENTAGE OF GRASS VERSUS BARE GROUND?	PERCENTAGE OF UNWANTED VEGETATION?
COVER- WEST	none to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0-90%	CEDII, SAIBI, KOSCI, CIARI, VETHI <1%
COVER - EAST	none to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0-100%	CEDII, SAIBI, VETHI, KOSCI, CIARI <1%
DIVERSION BERM 1	none to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0-85%	SAIBI, KOSCI, CEDII, CIARI, VETHI <1%
DIVERSION BERM 2	Sparse to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5-80%	CEDII, CIARI, SAIBI, KOSCI, CHINI, VETHI <1%
DIVERSION BERM 3	Sparse to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5-60%	CEDII, SAAM, SAEKI, PODCI, SAIBI, KOSCI, <1%
DIVERSION BERM 4	Sparse to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5-40%	SAIBI, KOSCI, CEDII <1%
DIVERSION BERM 5	Sparse to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5-60%	CEDII, KOSCI, SAIBI, ONACI <1%
DIVERSION BERM 6	Sparse to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5-50%	CEDII, KOSCI, ERCHI, SHIBI <1%
DIVERSION BERM 7	Sparse to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5-50%	CEDII, CANVI, SAIBI, ERCHI, KOSCI <1%
WEST PERIMETER CHANNEL	none to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5-90%	CEDII, VETHI, SAIBI, BRIEI, CIARI, KOSCI, HYPERI <1%
EAST PERIMETER CHANNEL	none to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0-90%	KOSCI, CIARI, CEDII <1%
UPPER BUTTRESS FILL SIDESLOPE	Plot areas on top of buttress	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5-60%	KOSCI, SAIBI, CEDII, VETHI, ERCHI <1%
LOWER BUTTRESS FILL SIDESLOPE	Slope	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0-90%	VETHI, LIDAI, CEDII, BRIEI, KOSCI, SAIBI, CIARI <2%

\* Unwanted vegetation includes weeds and deep-rooting trees.

## MAINTENANCE REQUIRED / COMMENTS

*SAEKI, SAAM, & PODCI seedlings are growing in the west areas behind Berm 3.**LKN 8/8/07*

## STORMWATER MANAGEMENT STRUCTURES

### CHANNELS / LINING

STRUCTURE	EVIDENCE OF EXCESSIVE EROSION, GULLYING, SCOUR, OR UNDERMINING?	EVIDENCE OF SETTLEMENT/ SUBSIDENCE OR DEPRESSIONS?	EVIDENCE OF BREACHING OR BANK FAILURE?	EVIDENCE OF BURROWING ANIMALS?	EVIDENCE OF SEDIMENT BUILD-UP OR OTHER BLOCKAGE?	EVIDENCE OF LINING DETERIORATION, HOLES, RIPS, OR SEPARATION?	EVIDENCE OF LINING DISPLACEMENT?
DIVERSION BERM 1	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
DIVERSION BERM 2	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
DIVERSION BERM 3	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
DIVERSION BERM 4	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
DIVERSION BERM 5	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
DIVERSION BERM 6	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
DIVERSION BERM 7	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
CHECK DAMS	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
WEST PERIMETER CHANNEL	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
EAST PERIMETER CHANNEL	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

#### OTHER DEFICIENCIES?

None

#### MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

The lining displacement from the berm #1 slump was repaired during the re-grade project.

## STORMWATER MANAGEMENT STRUCTURES (CONTINUED)

### OUTFALLS

CHECK EACH STRUCTURE FOR EXCESSIVE EROSION AND SEDIMENT DEPTH. IF SEDIMENT DEPTH IS COMPROMISING THE DESIGN CHARACTERISTICS, REMOVE SEDIMENT.

STRUCTURE	CONDITION / SEDIMENT DEPTH
DIVERSION BERM OUTFALL 1	Good / Minimal Sediment
DIVERSION BERM OUTFALL 2	Good / Minimal Sediment
DIVERSION BERM OUTFALL 3	Good / Minimal Sediment
DIVERSION BERM OUTFALL 4	Good / Minimal Sediment
DIVERSION BERM OUTFALL 5	Good / Minimal Sediment
DIVERSION BERM OUTFALL 6	Good / Minimal Sediment
DIVERSION BERM OUTFALL 7	Fair / End of berm is sliding into EPC
WEST PERIMETER CHANNEL OUTFALL	Good / Minimal Sediment
EAST PERIMETER CHANNEL OUTFALL	Good / Minimal Sediment
FRENCH DRAIN OUTFALL (SID)	Good / Minimal Sediment

OTHER DEFICIENCIES?

None

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

There are no severe blockages of the EPC due to the berm #7 slide.

**"RUN-ON" CONTROL**

AREA	ADVERSELY AFFECTING OLF?		
NORTH OF THE ORIGINAL LANDFILL	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
WEST OF THE WEST PERIMETER CHANNEL	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
EAST OF THE EAST PERIMETER CHANNEL	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
NORTH OF WOMAN CREEK	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —

MAINTENANCE REQUIRED

*None*

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## INSTITUTIONAL CONTROLS

**ITEM**

EVIDENCE OF EXCAVATION(S) OF COVER AND IMMEDIATE VICINITY OF COVER?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	COMMENT:	The area around berm #1 was excavated, filled, and compacted to fix the slump.
EVIDENCE OF CONSTRUCTION OF ROADS, TRAILS ON COVER OR BUILDINGS?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	COMMENT:	A trail from the top of the land fill down to berm #3 was used for the slump project
EVIDENCE OF UNAUTHORIZED ENTRY?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	COMMENT:	n/a
EVIDENCE OF DRILLING OF WELLS OR USE OF GROUNDWATER?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	COMMENT:	n/a
DAMAGE OR REMOVAL OF ANY SIGNAGE OR GROUNDWATER MONITORING WELLS?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	COMMENT:	n/a

OTHER DEFICIENCIES/PHOTO LOG

The entire area of the slump re-grade project was seeded and covered with erosion matting upon completion of the project.

## ACTION ITEMS

DEFICIENCY	DATE NOTED	ACTION	DATE COMPLETED	COMMENTS
Berm #1 slump	2/07	smooth and compact slump crack	7/30/07 - 8/2/07	Looks good!
Berm #1, #2, + #3 cracks	2/07	compact cracks	7/30/07 - 8/2/07	Looks good!

INSPECTOR SIGNATURE:  DATE: 8/27/07

REVIEWER SIGNATURE: George Samuels DATE: 8/27/07

# ORIGINAL LANDFILL – MONITORING AND MAINTENANCE PROGRAM

## INSPECTION FORM

INSPECTOR: J. McLaughlin

DATE: 9/27/07 TIME: 1100 REVIEWED BY: Gaye Sgall

TEMPERATURE: 80 °F WEATHER CONDITIONS: Sunny + clear REVIEW DATE: 10-1-07

METEOROLOGICAL STATION LOCATION: NREL Wind Site

### SUBSIDENCE / CONSOLIDATION

REGION	EVIDENCE OF CRACKS?	EVIDENCE OF DEPRESSIONS?	EVIDENCE OF SINK HOLES?	EVIDENCE OF PONDING?	OTHER (DESCRIBE BELOW)
COVER - WEST	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>WPL Slump</u>
COVER - EAST	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>Berm 7 crack</u> <u>Berm 4 depression</u>
BUTTRESS FILL	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-			
DIVERSION BERM 1	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-
DIVERSION BERM 2	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-
DIVERSION BERM 3	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-
DIVERSION BERM 4	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>Berm 4 depression</u>
DIVERSION BERM 5	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>Berm 4 depression</u>
DIVERSION BERM 6	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-			
DIVERSION BERM 7	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>Berm 7 / EPL Slump</u>

Settlement Plates on Top of cover to be inspected for integrity.

During Year 1, they will be surveyed quarterly, and annually thereafter.

Integrity intact?

Yes  No

### MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

The berm #1 Slump re-graded area continues to look good. There was a precipitation event of ≈ .9" on 9/24/07 and the berm dispersed the water as designed with no problems.

## SLOPE STABILITY

REGION	cracks		EVIDENCE OF BLOCK OR CIRCULAR FAILURE?	EVIDENCE OF SEEPS?	OTHER? (DESCRIBE BELOW)
	EVIDENCE OF SEEPS?				
COVER - WEST	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes No <i>Seep #7 + #4</i>
COVER - EAST	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes No <i>Seep #2 + #3</i>
BUTTRESS FILL SIDESLOPE	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes No -
WEST PERIMETER CHANNEL SIDESLOPES	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes No <i>WPC Slump</i>
EAST PERIMETER CHANNEL SIDESLOPES	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes No <i>Berm 7/EPL Slump</i>
COVER SEEPS (IF PRESENT)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes No <i>See below</i>
				<input type="checkbox"/> Yes No	
				<input type="checkbox"/> Yes No	

### MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

*Seep #4 is flowing steadily and has a lot of cattails growing in it. Seep #7 has dried out and isn't showing any artesian flow. Seeps #1, #2, + #3 flow for a short time after precipitation events. Seep #8 continues to show steady artesian flow.*

## SOIL COVER

REGION	EVIDENCE OF SOIL DEPOSITION OR EROSION?	EVIDENCE OF EROSION RILLS/GULLIES?	EVIDENCE OF BURROWING ANIMALS?	OTHER (DESCRIBE BELOW)
COVER - WEST	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	small amount of erosion in trough of barn #3
COVER - EAST	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-
BUTTRESS FILL	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-
BUTTRESS FILL SIDESLOPE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-

### MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

The erosion in the trough of barn #3 is the same as was reported before. It requires no maintenance at this time.

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OLF Vegetation Survey 9/12/07  
Jen Nelson

VEGETATION

REGION	CONDITION OF GRASS	UNWANTED VEGETATION PRESENT?	PERCENTAGE OF GRASS VERSUS BARE GROUND?	PERCENTAGE OF UNWANTED VEGETATION?
COVER- WEST	none to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0 - 90%	CEMI, KOSCI, SAIBI, VEBLI, CLARI, ~2%
COVER - EAST	none to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0 - 100%	CEMI, KOSCI, SAIBI, ERCL, VETHI, CLARI, ~3%
DIVERSION BERM 1	none to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0 - 85%	SAIBI, KOSCI, CEDII, VETHI, ~1%
DIVERSION BERM 2	Sparse to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5 - 80%	SAIBI, KOSCI, CEDII, CLARI, VETHI, ~2%
DIVERSION BERM 3	Sparse to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5 - 60%	PoAEI, VEBLI, CLARI, VETHI, ~1%
DIVERSION BERM 4	Sparse to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5 - 60%	PoAEI, SAAMI, SAEXI, SOAKI, HYPEI, KOSCI, CLARI, SAIBI, CEDII, ERCL, ~35% mostly Kosci & SAIBI
DIVERSION BERM 5	Sparse to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5 - 60%	CEDII, KOSCI, SAIBI, CLASI, ~5%
DIVERSION BERM 6	Sparse to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5 - 50%	CEMI, KOSCI, SAIBI, HYPEI, COAKI, ~1%
DIVERSION BERM 7	Sparse to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5 - 60%	PoAEI, KOSCI, SAIBI, CEDII, ERCL, ~3%
WEST PERIMETER CHANNEL	Sparse to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5 - 90%	CEMI, CLARI, KOSCI, HYPEI, VETHI, ~2%
EAST PERIMETER CHANNEL	none to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0 - 90%	CEMI, KOSCI, SAIBI, VETHI, ~2%
UPPER BUTTERESS FILL SIDESLOPE	Sideslope on top	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5 - 60%	KOSCI, CEDII, SAIBI, VETHI, ERCL, ~1%
LOWER BUTTRESS FILL SIDESLOPE	Sideslope	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5 - 90%	KOSCI, VETHI, SAIBI, LIGAI, VEBLI, BRTEI, ~5% 9/12/07

\* Unwanted vegetation includes weeds and deep-rooting trees.

MAINTENANCE REQUIRED / COMMENTS

Hundreds PoAEI, PoACI seedlings behind Bm 3. Will herbicide next Spring/Summer.  
Lots of SAEXI & SAAMI seedlings too.

J.K.W. 9/12/07

## STORMWATER MANAGEMENT STRUCTURES

### CHANNELS / LINING

STRUCTURE	EVIDENCE OF EXCESSIVE EROSION, GULLYING, SCOUR, OR UNDERMINING?	EVIDENCE OF SETTLEMENT/ SUBSIDENCE OR DEPRESSIONS?	EVIDENCE OF BREACHING OR BANK FAILURE?	EVIDENCE OF BURROWING ANIMALS?	EVIDENCE OF SEDIMENT BUILD-UP OR OTHER BLOCKAGE?	EVIDENCE OF LINING DETERIORATION, HOLES, RIPS, OR SEPARATION?	EVIDENCE OF LINING DISPLACEMENT?
DIVERSION BERM 1	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
DIVERSION BERM 2	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
DIVERSION BERM 3	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
DIVERSION BERM 4	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
DIVERSION BERM 5	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
DIVERSION BERM 6	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
DIVERSION BERM 7	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
CHECK DAMS	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
WEST PERIMETER CHANNEL	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
EAST PERIMETER CHANNEL	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

OTHER DEFICIENCIES?

None

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

There are several small depressions across the land fill cover and the berms. The depressions are due to settling and require no maintenance at this time.

## STORMWATER MANAGEMENT STRUCTURES (CONTINUED)

### OUTFALLS

CHECK EACH STRUCTURE FOR EXCESSIVE EROSION AND SEDIMENT DEPTH. IF SEDIMENT DEPTH IS COMPROMISING THE DESIGN CHARACTERISTICS, REMOVE SEDIMENT.

STRUCTURE	CONDITION / SEDIMENT DEPTH
DIVERSION BERM OUTFALL 1	Good / Minimal Sediment
DIVERSION BERM OUTFALL 2	
DIVERSION BERM OUTFALL 3	
DIVERSION BERM OUTFALL 4	
DIVERSION BERM OUTFALL 5	
DIVERSION BERM OUTFALL 6	
DIVERSION BERM OUTFALL 7	Fair / End of berm has broken off and slid into EPC
WEST PERIMETER CHANNEL OUTFALL	Good / Minimal sediment
EAST PERIMETER CHANNEL OUTFALL	
FRENCH DRAIN OUTFALL (SID)	

OTHER DEFICIENCIES?

None.

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

The end of berm #7 is not affecting the drainage of the East Perimeter Channel.

**“RUN-ON” CONTROL**

AREA	ADVERSELY AFFECTING OLF?		
NORTH OF THE ORIGINAL LANDFILL	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: -
WEST OF THE WEST PERIMETER CHANNEL	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: -
EAST OF THE EAST PERIMETER CHANNEL	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: -
NORTH OF WOMAN CREEK	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: -

MAINTENANCE REQUIRED

*None.*

## INSTITUTIONAL CONTROLS

ITEM			COMMENT:
EVIDENCE OF EXCAVATION(S) OF COVER AND IMMEDIATE VICINITY OF COVER?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	—
EVIDENCE OF CONSTRUCTION OF ROADS, TRAILS ON COVER OR BUILDINGS?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	—
EVIDENCE OF UNAUTHORIZED ENTRY?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	—
EVIDENCE OF DRILLING OF WELLS OR USE OF GROUNDWATER?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	—
DAMAGE OR REMOVAL OF ANY SIGNAGE OR GROUNDWATER MONITORING WELLS?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	—

### OTHER DEFICIENCIES/PHOTO LOG

*None.*

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## ACTION ITEMS

INSPECTOR SIGNATURE: Chapman DATE: 9/27/07

REVIEWER SIGNATURE: Jay Senn DATE: 10-1-07

# PRESENT LANDFILL – MONITORING AND MAINTENANCE PROGRAM

## INSPECTION FORM

INSPECTOR: J. McLaughlin DATE: 6/25/07 TIME: 1430 REVIEWED BY: George Senn

TEMPERATURE: 90°F WEATHER CONDITIONS: Sunny + Hot! REVIEW DATE: 7-26-07

METEOROLOGICAL STATION LOCATION: NREL Wind Site

### SUBSIDENCE/CONSOLIDATION

REGION	EVIDENCE OF CRACKS?	EVIDENCE OF DEPRESSIONS?	EVIDENCE OF SINK HOLES?	EVIDENCE OF PONDING?	OTHER (DESCRIBE BELOW)
TOP OF COVER – WEST	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
TOP OF COVER – EAST	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
COVER SIDESLOPE – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
COVER SIDESLOPE – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
EAST FACE SLOPE – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
EAST FACE SLOPE – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
EAST FACE SLOPE – CENTRAL	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
EAST FACE SLOPE – NORTH SEEP*	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			

Settlement Plates and side-slope monitoring points to be inspected for integrity.  
During Year 1, they will be surveyed quarterly, and annually thereafter

Integrity intact?  
 Yes  No

### MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

None

\* AREA OF SEEP IS OUTSIDE OF LANDFILL COVER AND EAST OF THE COVER ANCHOR TRENCH

## SLOPE STABILITY

REGION	EVIDENCE OF CRACKS?	EVIDENCE OF BLOCK OR CIRCULAR FAILURE?	EVIDENCE OF SEEPS?	OTHER (DESCRIBE BELOW)
COVER SIDESLOPE – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
COVER SIDESLOPE – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
PERIMETER CHANNEL OUTER SLOPE – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
PERIMETER CHANNEL OUTER SLOPE – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
EAST FACE SLOPE – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
EAST FACE SLOPE – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
EAST FACE SLOPE – CENTRAL	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
EAST FACE SLOPE – NORTH SEEP*	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	—

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

None.

\* AREA OF SEEP IS OUTSIDE OF LANDFILL COVER AND EAST OF THE COVER ANCHOR TRENCH

## SOIL COVER

REGION	EVIDENCE OF SOIL DEPOSITION OR EROSION?	EVIDENCE OF EROSION RILLS/GULLIES?	EVIDENCE OF BURROWING ANIMALS?	OTHER (DESCRIBE BELOW)
TOP OF COVER - WEST	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
TOP OF COVER - EAST	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
COVER SIDESLOPE - NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
COVER SIDESLOPE - SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
EAST FACE SLOPE - NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
EAST FACE SLOPE - SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
EAST FACE SLOPE - CENTRAL	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
AREA WHERE EAST SLOPE CENTRAL MEETS EAST SLOPE NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
AREA WHERE EAST SLOPE CENTRAL MEETS EAST SLOPE SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
	<b>VENT CAPS IN PLACE &amp; SECURE?</b>	<b>STANDPIPES IN GOOD CONDITION?</b>	<b>BIRDS OR INSECTS IN VENT CAPS?</b>	
COVER - BAROMETRIC VENTS	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

*None.*

PLF Veg Survey

July 11/07

## VEGETATION

Lody K Nelson

REGION	CONDITION OF GRASS	UNWANTED VEGETATION PRESENT?	OTHER (DESCRIBE BELOW)
TOP OF COVER - WEST	good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	VETHI, CEDH, LIDAI, L19% Spray = 07
TOP OF COVER - EAST	Moderate to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	VETHI, LIBAI, CEDH, HYPEI, L19%
EAST FACE SLOPE - NORTH	none to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CEDH, CIARI, HYPEI, VETHI, LIDAI, 59%
EAST FACE SLOPE - SOUTH	none to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CEDH, HYPEI, CIARI, 29%
EAST FACE SLOPE - CENTRAL	none to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CEDH, HYPEI, CIARI, 59%
COVER SIDESLOPE - NORTH	good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CIARI, VETHI, L19% Spray = 07
COVER SIDESLOPE - SOUTH	Moderate to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CEDH, VETHI, CIARI, LIDAI, ERCH, L19%, COARI, LIDAI, 59% Spray = 07
VEGETATION-LINED PERIMETER CHANNEL - NORTH	none to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	L19% Spray = 07
VEGETATION-LINED PERIMETER CHANNEL - SOUTH	none to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CEDH, VETHI, L19% Spray = 07

\* Unwanted vegetation includes weeds and deep-rooting trees.

## MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

East Face Slope - Central - Few SAMMI starting to come up at top of slope, just west of toilet spot.  
 Overall looks pretty good. East slope is mostly bare rock under erosion water.


 Lody K Nelson

## SEEP TREATMENT SYSTEM

REGION	EVIDENCE OF PLUGGING, OBSTRUCTIONS, OR EXCESS DEBRIS?	EVIDENCE OF CRACKS OR DETERIORATION?	OTHER (DESCRIBE BELOW)
GWIS INLET PIPES	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
STRIP DRAIN INLET PIPE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
NORTH MANHOLE OUTLET PIPE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
SOUTH MANHOLE OUTLET PIPE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
TREATMENT UNIT	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
TREATMENT UNIT OUTLET PIPE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
NORTH MANHOLE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	There are small cracks in concrete
SOUTH MANHOLE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	There are small cracks in concrete
TREATMENT UNIT GRATING	NA	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—

### MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

No maintenance necessary.

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## STORMWATER MANAGEMENT STRUCTURES

### CHANNELS/LINING

STRUCTURE	EVIDENCE OF EXCESSIVE EROSION, GULLYING, SCOUR, OR UNDERMINING?	EVIDENCE OF SETTLEMENT/ SUBSIDENCE OR DEPRESSIONS?	EVIDENCE OF BREACHING OR BANK FAILURE?	EVIDENCE OF BURROWING ANIMALS?	EVIDENCE OF SEDIMENT BUILD-UP OR OTHER BLOCKAGE?	EVIDENCE OF LINING DETERIORATION, HOLES, RIPS, OR SEPARATION?	EVIDENCE OF LINING DISPLACEMENT?
DIVERSION BERM	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
VEGETATION-LINED PERIMETER CHANNEL – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
VEGETATION-LINED PERIMETER CHANNEL – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
RIPRAP-LINED PERIMETER CHANNEL	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
C350-LINED EAST FACE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
EAST FACE RIPRAP CHANNEL – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
EAST FACE RIPRAP CHANNEL – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						

OTHER DEFICIENCIES?

*None*

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

*None*

## STORMWATER MANAGEMENT STRUCTURES (CONTINUED)

### OUTFALLS

CHECK EACH STRUCTURE FOR EXCESSIVE EROSION AND SEDIMENT DEPTH. IF SEDIMENT DEPTH IS COMPROMISING THE DESIGN CHARACTERISTICS, REMOVE SEDIMENT.

STRUCTURE	CONDITION/SEDIMENT DEPTH
DIVERSION BERM OUTFALL - NORTH	Good condition / No sediment
DIVERSION BERM OUTFALL - SOUTH	
CULVERT 1 OUTFALL	
CULVERT 2 OUTFALL	
SOUTHWEST CULVERT OUTFALL	

### CULVERTS

CHECK EACH STRUCTURE FOR BLOCKAGE, SURROUNDING CONDITIONS, BREACHING, SEDIMENT BUILD-UP, AND INLET/OUTLET CONDITIONS.

STRUCTURE	CONDITION
CULVERT 1	Good condition / No sediment
CULVERT 2	
SOUTHWEST CULVERT	

### MAINTENANCE REQUIRED/PHOTO LOG

None.

## "RUN-ON" EROSION CONTROL

AREA	ADVERSELY AFFECTING PLF?		
RUN-ON INTO PERIMETER CHANNEL – NORTH	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
RUN-ON INTO PERIMETER CHANNEL – SOUTH	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
NATURAL DRAINAGE FED BY CULVERT 1	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
NATURAL DRAINAGE FED BY NORTHEAST PERIMETER CHANNEL	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
NATURAL DRAINAGE FED BY RIPRAP	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —

### MAINTENANCE REQUIRED/PHOTO LOG

*None*

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## INSTITUTIONAL CONTROLS

ITEM			COMMENT:
EVIDENCE OF EXCAVATION(S) OF COVER AND IMMEDIATE VICINITY OF COVER?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	—
EVIDENCE OF CONSTRUCTION OF ROADS OR TRAILS ON COVER OR BUILDINGS?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	—
EVIDENCE OF UNAUTHORIZED ENTRY?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	—
EVIDENCE OF DRILLING OF WELLS OR USE OF GROUNDWATER?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	—
DISRUPTION OR DAMAGE OF SEEP TREATMENT SYSTEM?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	—
DAMAGE OR REMOVAL OF ANY SIGNAGE OR GROUNDWATER MONITORING WELLS?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	—

### OTHER DEFICIENCIES/PHOTO LOG

*None*

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## ACTION ITEMS

INSPECTOR SIGNATURE:  DATE: 7/25/07

**REVIEWER SIGNATURE:** *[Signature]* **DATE:** *7-26-07*

**PRESENT LANDFILL – MONITORING AND MAINTENANCE PROGRAM**

**INSPECTION FORM**

INSPECTOR: J. McLaughlin DATE: 8/27/02 TIME: 1300 REVIEWED BY: Joe Sennell

TEMPERATURE: 90°F WEATHER CONDITIONS: 90°F P. Cloudy REVIEW DATE: 8/27/02

METEOROLOGICAL STATION LOCATION: NREL Wind Site

**SUBSIDENCE/CONSOLIDATION**

REGION	EVIDENCE OF CRACKS?	EVIDENCE OF DEPRESSIONS?	EVIDENCE OF SINK HOLES?	EVIDENCE OF PONDING?	OTHER (DESCRIBE BELOW)
TOP OF COVER – WEST	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
TOP OF COVER – EAST	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
COVER SIDESLOPE – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
COVER SIDESLOPE – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
EAST FACE SLOPE – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
EAST FACE SLOPE – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
EAST FACE SLOPE – CENTRAL	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
EAST FACE SLOPE – NORTH SEEP*	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			

Settlement Plates and side-slope monitoring points to be inspected for integrity.  
During Year 1, they will be surveyed quarterly, and annually thereafter

Integrity intact?  
 Yes  No

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

None.

\* AREA OF SEEP IS OUTSIDE OF LANDFILL COVER AND EAST OF THE COVER ANCHOR TRENCH

## SLOPE STABILITY

REGION	EVIDENCE OF CRACKS?	EVIDENCE OF BLOCK OR CIRCULAR FAILURE?	EVIDENCE OF SEEPS?	OTHER (DESCRIBE BELOW)
COVER SIDESLOPE – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
COVER SIDESLOPE – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
PERIMETER CHANNEL OUTER SLOPE – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
PERIMETER CHANNEL OUTER SLOPE – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
EAST FACE SLOPE – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
EAST FACE SLOPE – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
EAST FACE SLOPE – CENTRAL	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
EAST FACE SLOPE – NORTH SEEP*	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

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*None*

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\* AREA OF SEEP IS OUTSIDE OF LANDFILL COVER AND EAST OF THE COVER ANCHOR TRENCH

## SOIL COVER

REGION	EVIDENCE OF SOIL DEPOSITION OR EROSION?	EVIDENCE OF EROSION RILLS/GULLIES?	EVIDENCE OF BURROWING ANIMALS?	OTHER (DESCRIBE BELOW)
TOP OF COVER – WEST	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
TOP OF COVER – EAST	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
COVER SIDESLOPE – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
COVER SIDESLOPE – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
EAST FACE SLOPE – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
EAST FACE SLOPE – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
EAST FACE SLOPE – CENTRAL	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
AREA WHERE EAST SLOPE CENTRAL MEETS EAST SLOPE NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
AREA WHERE EAST SLOPE CENTRAL MEETS EAST SLOPE SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
	<b>VENT CAPS IN PLACE &amp; SECURE?</b>	<b>STANDPIPES IN GOOD CONDITION?</b>	<b>BIRDS OR INSECTS IN VENT CAPS?</b>	
COVER – BAROMETRIC VENTS	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

*None.*

PLF Veg Survey 8/8/07  
Joly K Nels

VEGETATION

REGION	CONDITION OF GRASS	UNWANTED VEGETATION PRESENT?	OTHER (DESCRIBE BELOW)	
TOP OF COVER - WEST	good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CEDII, VETHI, CIARI, LIDAI, COARI	< 0.5%
TOP OF COVER - EAST	moderate to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	LIDAI, VETHI, CIARI, CEDII, HYPEI	< 1%
EAST FACE SLOPE - NORTH	none to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CIARI, CEDII, VETHI, HYPEI, LIDAI, COARI	5%
EAST FACE SLOPE - SOUTH	none to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	HYPEI, CEDII, ULPUI, SAIBI, CIABEL, SAEKI, CIARI, CEDII, HYPEI, VETHI, COARI	< 2%
EAST FACE SLOPE - CENTRAL	none to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	KOSGI, VETHI, CIARI	5%
COVER SIDESLOPE - NORTH	moderate to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	KOSGI, ERCHI, VETHI, LIDAI	< 1%
COVER SIDESLOPE - SOUTH	sparse to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CEBII, LIDAI, CIVOI	< 1%
VEGETATION-LINED PERIMETER CHANNEL - NORTH	none to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CIARI, VETHI, CEDII	< 1%
VEGETATION-LINED PERIMETER CHANNEL - SOUTH	none to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		< 1%

\* Unwanted vegetation includes weeds and deep-rooting trees.

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

ULPUI growing on E.Face - not top of S.Face, middle of S. Face, & corner of Central & S. Face.

SAEKI growing on E.Face - not being E. Face in case where Central & South Face meet.

All trees cut off & stumps sprayed w/ Round up.

J K Nels 8/8/07

## SEEP TREATMENT SYSTEM

REGION	EVIDENCE OF PLUGGING, OBSTRUCTIONS, OR EXCESS DEBRIS?	EVIDENCE OF CRACKS OR DETERIORATION?	OTHER (DESCRIBE BELOW)
GWIS INLET PIPES	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	—
STRIP DRAIN INLET PIPE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	—
NORTH MANHOLE OUTLET PIPE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	—
SOUTH MANHOLE OUTLET PIPE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	—
TREATMENT UNIT	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	—
TREATMENT UNIT OUTLET PIPE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	—
NORTH MANHOLE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hairline cracks in cement
SOUTH MANHOLE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hairline cracks in cement
TREATMENT UNIT GRATING	NA	<input type="checkbox"/> Yes <input type="checkbox"/> No	—

### MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

No maintenance is necessary.

## STORMWATER MANAGEMENT STRUCTURES

### CHANNELS/LINING

STRUCTURE	EVIDENCE OF EXCESSIVE EROSION, GULLYING, SCOUR, OR UNDERMINING?	EVIDENCE OF SETTLEMENT/ SUBSIDENCE OR DEPRESSIONS?	EVIDENCE OF BREACHING OR BANK FAILURE?	EVIDENCE OF BURROWING ANIMALS?	EVIDENCE OF SEDIMENT BUILD-UP OR OTHER BLOCKAGE?	EVIDENCE OF LINING DETERIORATION, HOLES, RIPS, OR SEPARATION?	EVIDENCE OF LINING DISPLACEMENT?
DIVERSION BERM	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
VEGETATION-LINED PERIMETER CHANNEL – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
VEGETATION-LINED PERIMETER CHANNEL – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
RIPRAP-LINED PERIMETER CHANNEL	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
C350-LINED EAST FACE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
EAST FACE RIPRAP CHANNEL – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
EAST FACE RIPRAP CHANNEL – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						

OTHER DEFICIENCIES?

*None*

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

*None*

## STORMWATER MANAGEMENT STRUCTURES (CONTINUED)

### OUTFALLS

CHECK EACH STRUCTURE FOR EXCESSIVE EROSION AND SEDIMENT DEPTH. IF SEDIMENT DEPTH IS COMPROMISING THE DESIGN CHARACTERISTICS, REMOVE SEDIMENT.

STRUCTURE	CONDITION/SEDIMENT DEPTH
DIVERSION BERM OUTFALL - NORTH	Good condition / No sediment
DIVERSION BERM OUTFALL - SOUTH	
CULVERT 1 OUTFALL	
CULVERT 2 OUTFALL	
SOUTHWEST CULVERT OUTFALL	

### CULVERTS

CHECK EACH STRUCTURE FOR BLOCKAGE, SURROUNDING CONDITIONS, BREACHING, SEDIMENT BUILD-UP, AND INLET/OUTLET CONDITIONS.

STRUCTURE	CONDITION
CULVERT 1	Good Condition / No sediment
CULVERT 2	
SOUTHWEST CULVERT	

### MAINTENANCE REQUIRED/PHOTO LOG

None.

## "RUN-ON" EROSION CONTROL

AREA	ADVERSELY AFFECTING PLF?		
RUN-ON INTO PERIMETER CHANNEL – NORTH	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
RUN-ON INTO PERIMETER CHANNEL – SOUTH	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
NATURAL DRAINAGE FED BY CULVERT 1	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
NATURAL DRAINAGE FED BY NORTHEAST PERIMETER CHANNEL	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
NATURAL DRAINAGE FED BY RIPRAP	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —

### MAINTENANCE REQUIRED/PHOTO LOG

None

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## INSTITUTIONAL CONTROLS

ITEM			COMMENT:	
EVIDENCE OF EXCAVATION(S) OF COVER AND IMMEDIATE VICINITY OF COVER?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT:	—
EVIDENCE OF CONSTRUCTION OF ROADS OR TRAILS ON COVER OR BUILDINGS?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT:	—
EVIDENCE OF UNAUTHORIZED ENTRY?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT:	—
EVIDENCE OF DRILLING OF WELLS OR USE OF GROUNDWATER?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT:	—
DISRUPTION OR DAMAGE OF SEEP TREATMENT SYSTEM?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT:	—
DAMAGE OR REMOVAL OF ANY SIGNAGE OR GROUNDWATER MONITORING WELLS?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT:	—

### OTHER DEFICIENCIES/PHOTO LOG

*None.*

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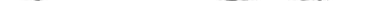
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## **ACTION ITEMS**

DEFICIENCY	DATE NOTED	ACTION	DATE COMPLETED	COMMENTS
		JAm		

INSPECTOR SIGNATURE:  DATE: 8/27/07

REVIEWER SIGNATURE: Joyce Sgouros DATE: 4/27/07

## PRESENT LANDFILL – MONITORING AND MAINTENANCE PROGRAM

### INSPECTION FORM

INSPECTOR: J. McLaughlin

DATE: 9/27/07 TIME: 1330 REVIEWED BY: Dave Sgoll

TEMPERATURE: 80°F WEATHER CONDITIONS: Sunny + Clear REVIEW DATE: 10-1-07

METEOROLOGICAL STATION LOCATION: NREL Wind Site

#### SUBSIDENCE/CONSOLIDATION

REGION	EVIDENCE OF CRACKS?	EVIDENCE OF DEPRESSIONS?	EVIDENCE OF SINK HOLES?	EVIDENCE OF PONDING?	OTHER (DESCRIBE BELOW)
TOP OF COVER – WEST	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
TOP OF COVER – EAST	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
COVER SIDESLOPE – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
COVER SIDESLOPE – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
EAST FACE SLOPE – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
EAST FACE SLOPE – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
EAST FACE SLOPE – CENTRAL	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			
EAST FACE SLOPE – NORTH SEEP*	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—			

Settlement Plates and side-slope monitoring points to be inspected for integrity.  
During Year 1, they will be surveyed quarterly, and annually thereafter

Integrity intact?  
 Yes  No

#### MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

None.

\* AREA OF SEEP IS OUTSIDE OF LANDFILL COVER AND EAST OF THE COVER ANCHOR TRENCH

## SLOPE STABILITY

REGION	EVIDENCE OF CRACKS?	EVIDENCE OF BLOCK OR CIRCULAR FAILURE?	EVIDENCE OF SEEPS?	OTHER (DESCRIBE BELOW)
COVER SIDESLOPE – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
COVER SIDESLOPE – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
PERIMETER CHANNEL OUTER SLOPE – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
PERIMETER CHANNEL OUTER SLOPE – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
EAST FACE SLOPE – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
EAST FACE SLOPE – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
EAST FACE SLOPE – CENTRAL	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
EAST FACE SLOPE – NORTH SEEP*	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	—

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

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\* AREA OF SEEP IS OUTSIDE OF LANDFILL COVER AND EAST OF THE COVER ANCHOR TRENCH

## SOIL COVER

REGION	EVIDENCE OF SOIL DEPOSITION OR EROSION?	EVIDENCE OF EROSION RILLS/GULLIES?	EVIDENCE OF BURROWING ANIMALS?	OTHER (DESCRIBE BELOW)
TOP OF COVER – WEST	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
TOP OF COVER – EAST	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
COVER SIDESLOPE – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
COVER SIDESLOPE – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
EAST FACE SLOPE – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
EAST FACE SLOPE – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
EAST FACE SLOPE -- CENTRAL	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
AREA WHERE EAST SLOPE CENTRAL MEETS EAST SLOPE NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
AREA WHERE EAST SLOPE CENTRAL MEETS EAST SLOPE SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—
	<b>VENT CAPS IN PLACE &amp; SECURE?</b>	<b>STANDPIPES IN GOOD CONDITION?</b>	<b>BIRDS OR INSECTS IN VENT CAPS?</b>	
COVER – BAROMETRIC VENTS	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	—

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

*None*

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9/12/07

PLF Vegetation Survey  
Landy Nelson

## VEGETATION

REGION	CONDITION OF GRASS	UNWANTED VEGETATION PRESENT?	OTHER (DESCRIBE BELOW)
TOP OF COVER - WEST	good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	KOSCI, HYPEI, VETHI, LIDAI, COARI
TOP OF COVER - EAST	moderate to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	LIDAI, HYPEI, VETHI, CEDH,
EAST FACE SLOPE - NORTH	none to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CIARI, HYPEI, ROARI, COARI,
EAST FACE SLOPE - SOUTH	none to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	VETHI, CEDH,
EAST FACE SLOPE - CENTRAL	none to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CEDH, SAIBI, HYPEI, VETHI, ULPUI, CIARI
COVER SIDESLOPE - NORTH	moderate to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	SAEXI, SAAMI, HYPEI, CIARI, CEDH, VETHI
COVER SIDESLOPE - SOUTH	Sparse to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CEDH, VETHI, KOSCI, SAIBI,
VEGETATION-LINED PERIMETER CHANNEL - NORTH	none to moderate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CEDH, VETHI, KOSCI,
VEGETATION-LINED PERIMETER CHANNEL - SOUTH	Sparse to good	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	LIDAI, CEDH VETHI, CEDH, CIARI, KOSCI SAIBI

\* Unwanted vegetation includes weeds and deep-rooting trees.

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

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J.K.N. 9/12/07

## SEEP TREATMENT SYSTEM

REGION	EVIDENCE OF PLUGGING, OBSTRUCTIONS, OR EXCESS DEBRIS?		EVIDENCE OF CRACKS OR DETERIORATION?	OTHER (DESCRIBE BELOW)
	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		
GWIS INLET PIPES	<input type="checkbox"/>	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/> No
STRIP DRAIN INLET PIPE	<input type="checkbox"/>	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/> No
NORTH MANHOLE OUTLET PIPE	<input type="checkbox"/>	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/> No
SOUTH MANHOLE OUTLET PIPE	<input type="checkbox"/>	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/> No
TREATMENT UNIT	<input type="checkbox"/>	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/> No
TREATMENT UNIT OUTLET PIPE	<input type="checkbox"/>	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/> No
NORTH MANHOLE	<input type="checkbox"/>	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/>	<input type="checkbox"/> No
SOUTH MANHOLE	<input type="checkbox"/>	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/>	<input type="checkbox"/> No
TREATMENT UNIT GRATING	NA		<input type="checkbox"/>	<input checked="" type="checkbox"/> No

### MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

None necessary.

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## STORMWATER MANAGEMENT STRUCTURES

### CHANNELS/LINING

STRUCTURE	EVIDENCE OF EXCESSIVE EROSION, GULLYING, SCOUR, OR UNDERMINING?	EVIDENCE OF SETTLEMENT/ SUBSIDENCE OR DEPRESSIONS?	EVIDENCE OF BREACHING OR BANK FAILURE?	EVIDENCE OF BURROWING ANIMALS?	EVIDENCE OF SEDIMENT BUILD-UP OR OTHER BLOCKAGE?	EVIDENCE OF LINING DETERIORATION, HOLES, RIPS, OR SEPARATION?	EVIDENCE OF LINING DISPLACEMENT?
DIVERSION BERM	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
VEGETATION-LINED PERIMETER CHANNEL – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
VEGETATION-LINED PERIMETER CHANNEL – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
RIPRAP-LINED PERIMETER CHANNEL	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
C350-LINED EAST FACE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
EAST FACE RIPRAP CHANNEL – NORTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
EAST FACE RIPRAP CHANNEL – SOUTH	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						

OTHER DEFICIENCIES?

*None.*

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MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

*None.*

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## STORMWATER MANAGEMENT STRUCTURES (CONTINUED)

### OUTFALLS

CHECK EACH STRUCTURE FOR EXCESSIVE EROSION AND SEDIMENT DEPTH. IF SEDIMENT DEPTH IS COMPROMISING THE DESIGN CHARACTERISTICS, REMOVE SEDIMENT.

STRUCTURE	CONDITION/SEDIMENT DEPTH
DIVERSION BERM OUTFALL – NORTH	Good condition / No sediment
DIVERSION BERM OUTFALL – SOUTH	
CULVERT 1 OUTFALL	
CULVERT 2 OUTFALL	
SOUTHWEST CULVERT OUTFALL	

### CULVERTS

CHECK EACH STRUCTURE FOR BLOCKAGE, SURROUNDING CONDITIONS, BREACHING, SEDIMENT BUILD-UP, AND INLET/OUTLET CONDITIONS.

STRUCTURE	CONDITION
CULVERT 1	Good condition / No sediment
CULVERT 2	
SOUTHWEST CULVERT	

### MAINTENANCE REQUIRED/PHOTO LOG

None.

## "RUN-ON" EROSION CONTROL

AREA	ADVERSELY AFFECTING PLF?		
RUN-ON INTO PERIMETER CHANNEL – NORTH	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
RUN-ON INTO PERIMETER CHANNEL – SOUTH	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
NATURAL DRAINAGE FED BY CULVERT 1	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
NATURAL DRAINAGE FED BY NORTHEAST PERIMETER CHANNEL	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
NATURAL DRAINAGE FED BY RIPRAP	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —

### MAINTENANCE REQUIRED/PHOTO LOG

None.

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## INSTITUTIONAL CONTROLS

<b>ITEM</b>			
EVIDENCE OF EXCAVATION(S) OF COVER AND IMMEDIATE VICINITY OF COVER?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
EVIDENCE OF CONSTRUCTION OF ROADS OR TRAILS ON COVER OR BUILDINGS?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
EVIDENCE OF UNAUTHORIZED ENTRY?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
EVIDENCE OF DRILLING OF WELLS OR USE OF GROUNDWATER?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
DISRUPTION OR DAMAGE OF SEEP TREATMENT SYSTEM?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —
DAMAGE OR REMOVAL OF ANY SIGNAGE OR GROUNDWATER MONITORING WELLS?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	COMMENT: —

### OTHER DEFICIENCIES/PHOTO LOG

*None.*

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## ACTION ITEMS

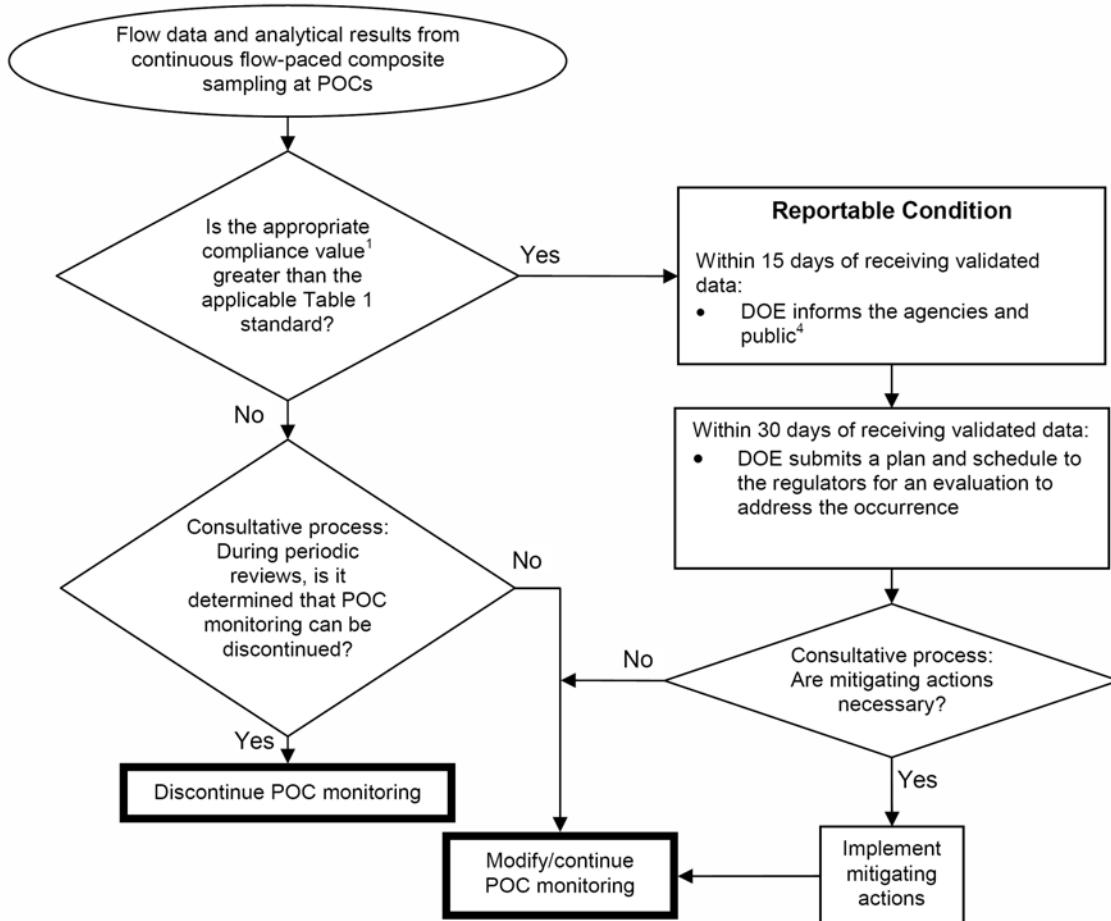
INSPECTOR SIGNATURE: G. Smith DATE: 9/27/07

REVIEWER SIGNATURE: George Sgouros DATE: 10-1-07

## **Appendix D**

### **Data Evaluation Flowcharts Reproduced From RFLMA and the RFSOG**

## ROCKY FLATS LEGACY MANAGEMENT AGREEMENT



Notes: see Fig. 1 and Tables 1 and 2 for locations, standards, and sampling criteria.

<sup>1</sup> Appropriate Compliance Values by locations and analytes (see Table 2 for reference)

- All Indiana Street POCs:
  - plutonium, americium, uranium → 30-day average<sup>2</sup>
- All Terminal Pond POCs:
  - plutonium, americium, uranium → 12-month rolling average<sup>3</sup>
- Walnut Creek at Indiana Street POCs:
  - nitrate → 85<sup>th</sup> percentile of 30-day averages<sup>3</sup> for previous calendar year
- Walnut Creek Terminal Pond POCs:
  - nitrate → 12-month rolling average<sup>2</sup>

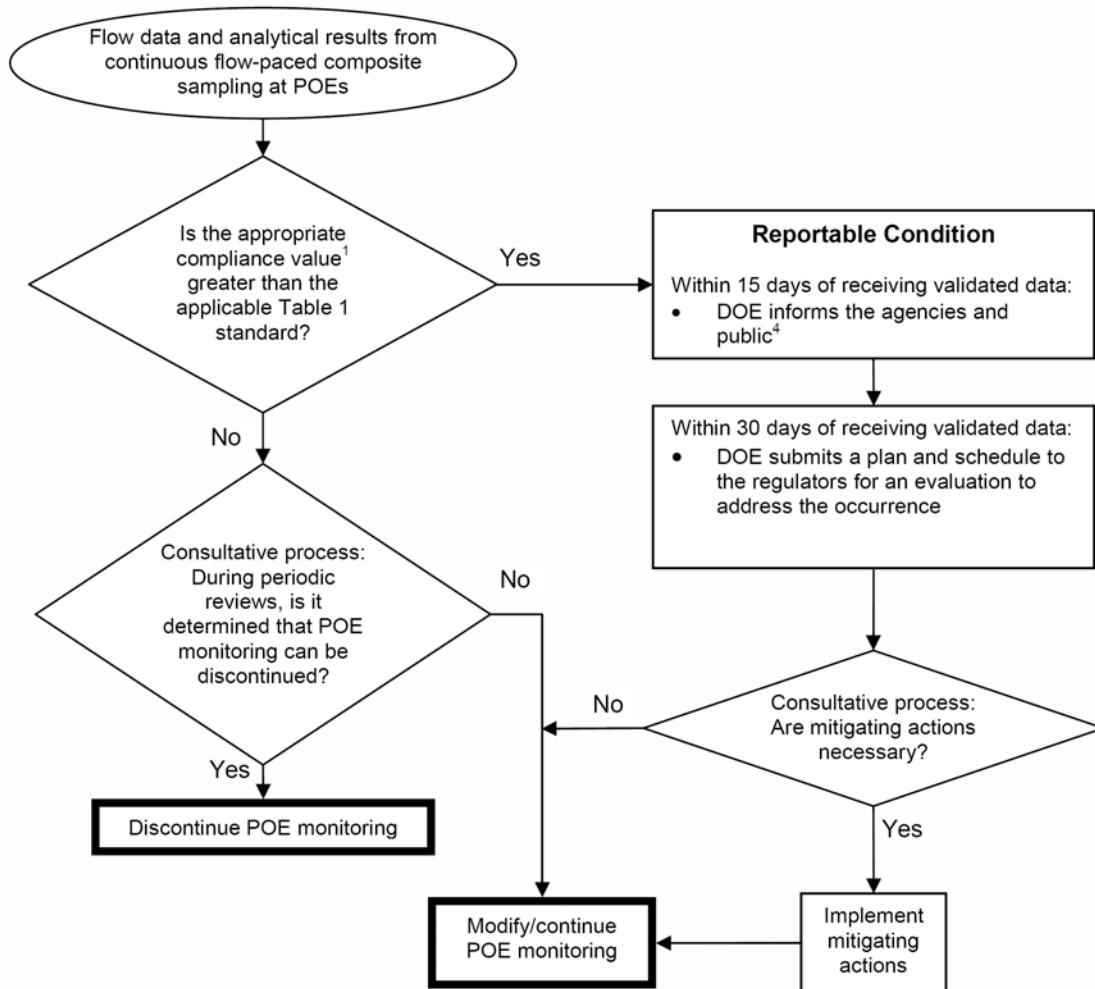
<sup>2</sup> The 30-day average for a particular day is calculated as a volume-weighted average of a "window" of time containing the previous 30 days with measurable flow. Each day has its own discharge volume (measured with a flow meter) and activity/concentration (from the sample carboy in place at the end of that day). Therefore, there are 365 30-day moving averages for a location that flows all year. At locations that have intermittent flows, 30-day averages are reported as averages of the previous 30 days of greater than zero flow. For days where no analytical result is available, either due to failed laboratory analysis or non-sufficient quantity (NSQ) for analysis, no 30-day average is reported.

<sup>3</sup> The 12-month rolling average for the last day of a particular month is calculated as a volume-weighted average of a "window" of time containing the previous 12 months. Each 12-month "window" includes daily discharge volumes (measured with a flow meter) and daily activities/concentrations (from the sample carboy in place at the end of that day). Therefore, there are twelve 12-month rolling averages for a given calendar year. Days with no flow or no analytical result, either due to failed laboratory analysis or NSQ for analysis, are not included in the average. When no flow has occurred in the previous 12 months, no 12-month rolling average is reported.

<sup>4</sup> Agencies: EPA, CDPHE, and USFWS  
Public: Cities of Broomfield, Northglenn, Thornton, and Westminster; Rocky Flats Stewardship Council (RFSC)

*Figure 5. Points of Compliance*

## ROCKY FLATS LEGACY MANAGEMENT AGREEMENT



Notes: see Fig. 1 and Tables 1 and 2 for locations, standards, and sampling criteria.

<sup>1</sup> Appropriate Compliance Values by analytes (see Table 2 for reference)

- plutonium, americium, uranium → 12-month rolling average<sup>2</sup>
- dissolved Cd and Ag, total Be and Cr → 85<sup>th</sup> percentile of 30-day averages<sup>3</sup> for previous calendar year

<sup>2</sup> The 30-day average for a particular day is calculated as a volume-weighted average of a "window" of time containing the previous 30-days with measurable flow. Each day has its own discharge volume (measured with a flow meter) and activity/concentration (from the sample carboy in place at the end of that day). Therefore, there are 365 30 day moving averages for a location that flows all year. At locations that have intermittent flows, 30-day averages are reported as averages of the previous 30 days of greater than zero flow. For days where no analytical result is available, either due to failed laboratory analysis or NSQ for analysis, no 30-day average is reported.

<sup>3</sup> The 12-month rolling average for the last day of a particular month is calculated as a volume-weighted average of a "window" of time containing the previous 12 months. Each 12-month "window" includes daily discharge volumes (measured with a flow meter) and daily activities/concentrations (from the sample carboy in place at the end of that day). Therefore, there are twelve 12-month rolling averages for a given calendar year. Days with no flow or no analytical result, either due to failed laboratory analysis or NSQ for analysis, are not included in the average. When no flow has occurred in the previous 12 months, no 12-month average is reported.

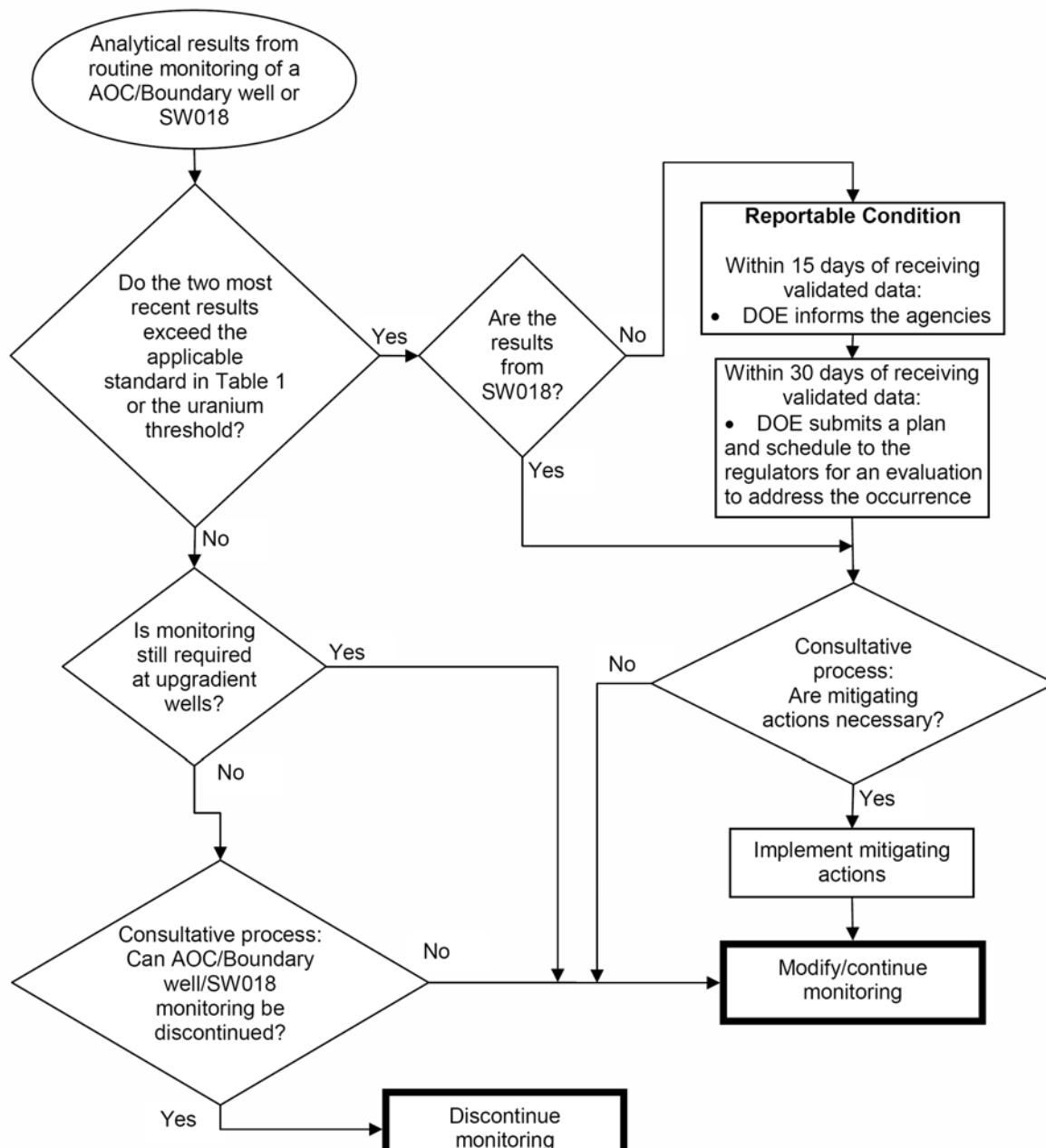
<sup>4</sup> Agencies: EPA, CDPHE, and USFWS

Public: Cities of Broomfield, Northglenn, Thornton, and Westminster; Rocky Flats Stewardship Council (RFSC)

*Figure 6. Points of Evaluation*

## ROCKY FLATS LEGACY MANAGEMENT AGREEMENT

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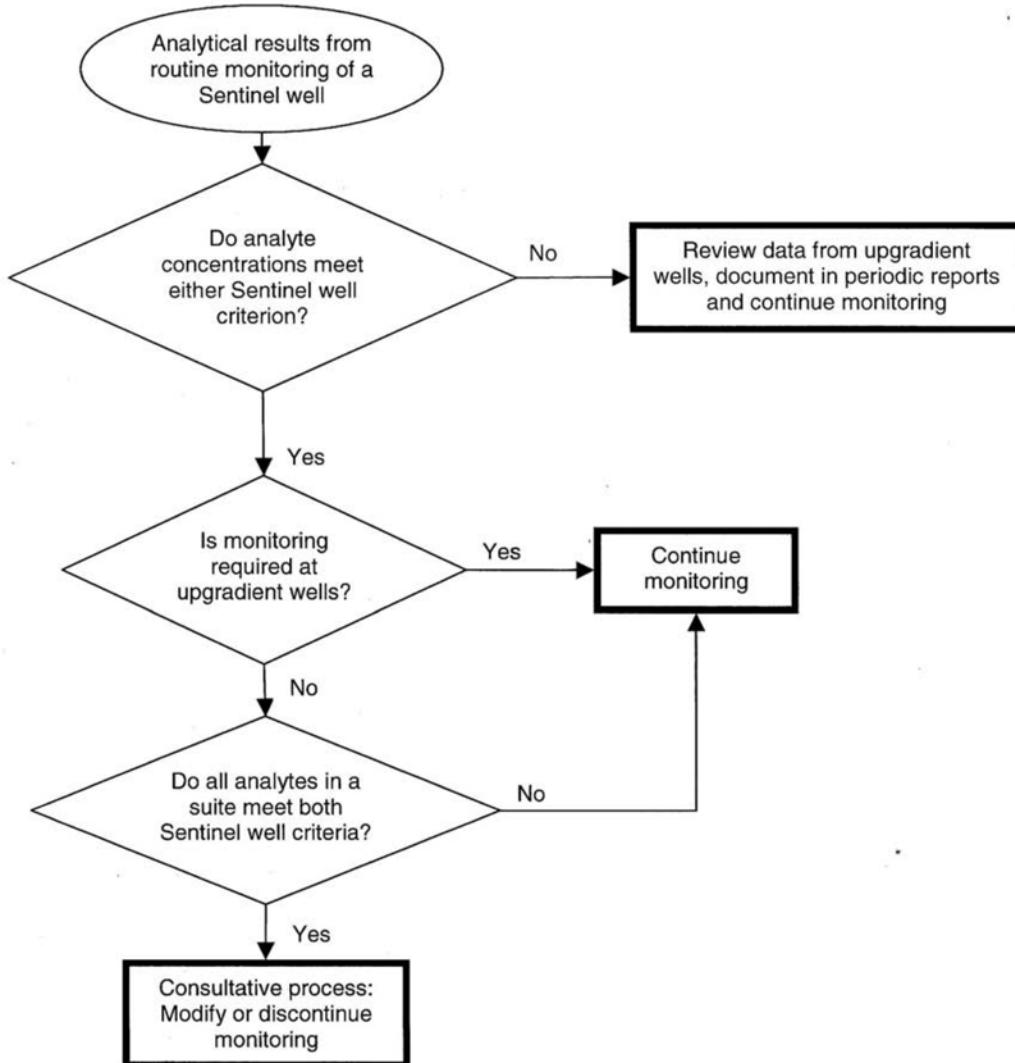
Notes: see Fig. 1 and Tables 1 and 2 for locations, standards, and sampling criteria.

- AOC wells and location SW018 are sampled twice each year; see Table 2.
- Boundary wells are sampled once each year; see Table 2. These wells are not part of the remedy, but are a component of operational monitoring.
- Decisions related to uranium in ground water are based upon a 16 ug/L threshold for Boundary wells (basis: the 11 pCi/L standard) and a 120 ug/L threshold for AOC wells (basis: a grand mean of results from Site-wide high-resolution uranium analyses performed in the late 1990s through mid-2000s), rather than the standard in Table 1.

*Figure 7. Area of Concern Wells, Boundary Wells, and SW018*

## ROCKY FLATS LEGACY MANAGEMENT AGREEMENT

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Notes: see Fig. 1 and Tables 1 and 2 for locations, standards, and sampling criteria.

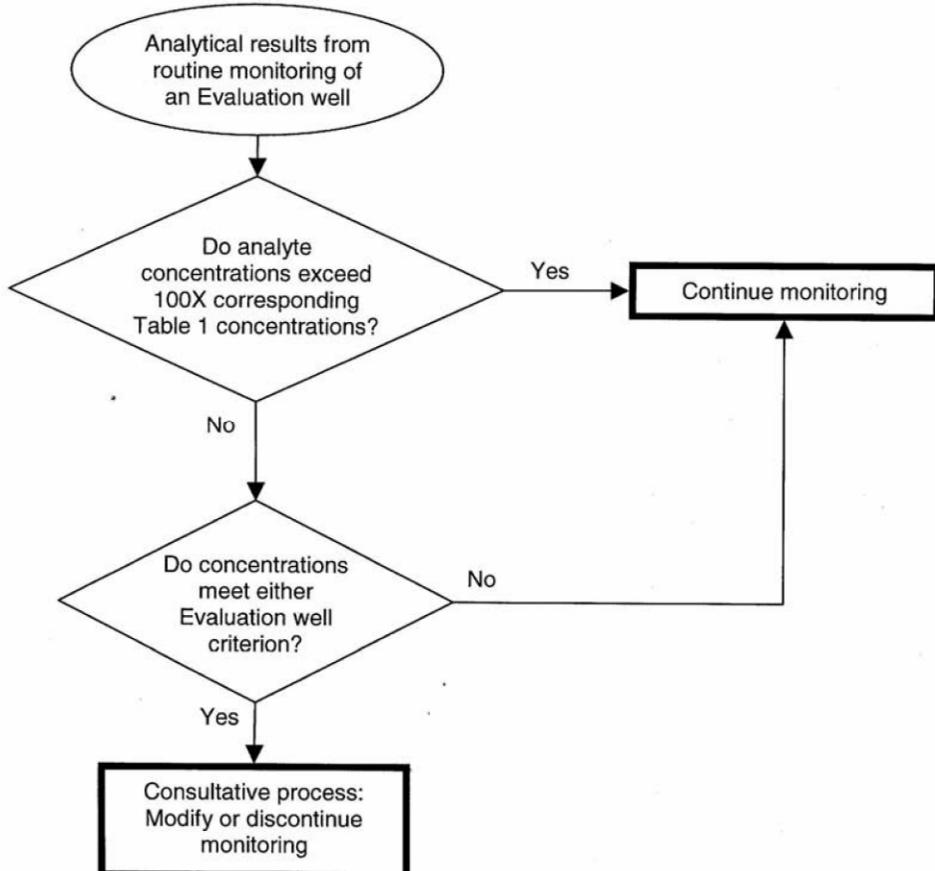
- Sentinel wells are sampled twice each year; see Table 2.
- Decisions related to uranium are based upon a 120 ug/L threshold for AOC wells (basis: a grand mean of results from Site-wide high-resolution uranium analyses performed in the late 1990s through mid-2000s), rather than the standard in Table 1.

**Sentinel Well Criteria**

1. The 85<sup>th</sup> percentile concentration of an analyte is *less than or equal to* the corresponding concentration in Table 1 or, for uranium, the 85<sup>th</sup> percentile concentration does not exceed 2x120 ug/L or the highest calendar year 2005 concentration, whichever is higher.
2. Analyte concentrations exhibit an indeterminate or statistically-significant *decreasing* trend at the 95% confidence level.

*Figure 8. Sentinel Wells*

## ROCKY FLATS LEGACY MANAGEMENT AGREEMENT



Notes: see Fig. 1 and Tables 1 and 2 for locations, standards, and sampling criteria.

- Evaluation wells are listed in Table 2.

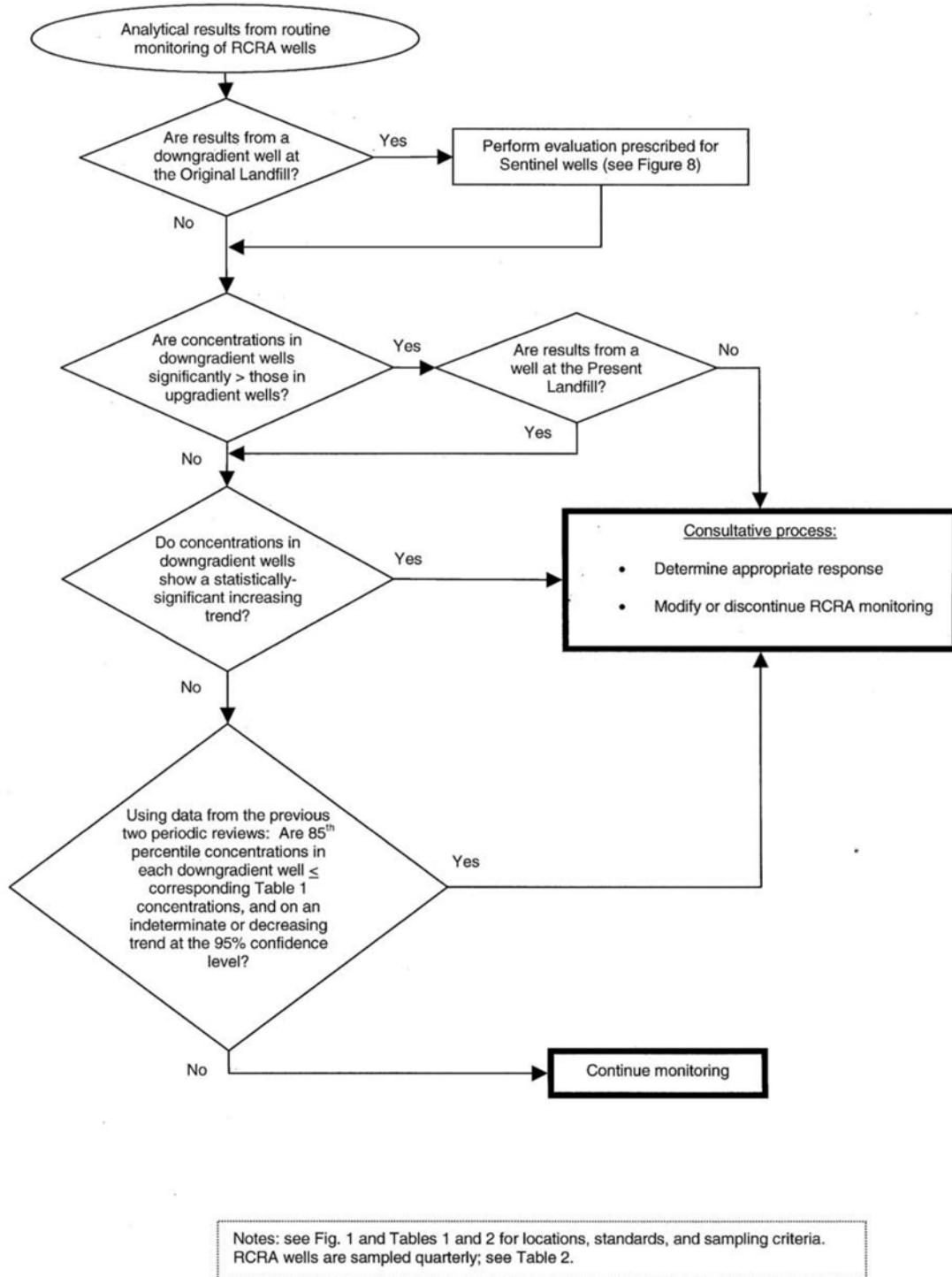
Evaluation Well Criteria:

- The 85<sup>th</sup> percentile concentration of an analyte is *less than or equal to* the corresponding concentration in Table 1, or, for uranium, 240 ug/L or highest pre-CY05 concentration, whichever is higher.
- Analyte concentrations exhibit an indeterminate or statistically-significant *decreasing* trend at the 95% confidence level.

Figure 9. Evaluation Wells

## ROCKY FLATS LEGACY MANAGEMENT AGREEMENT

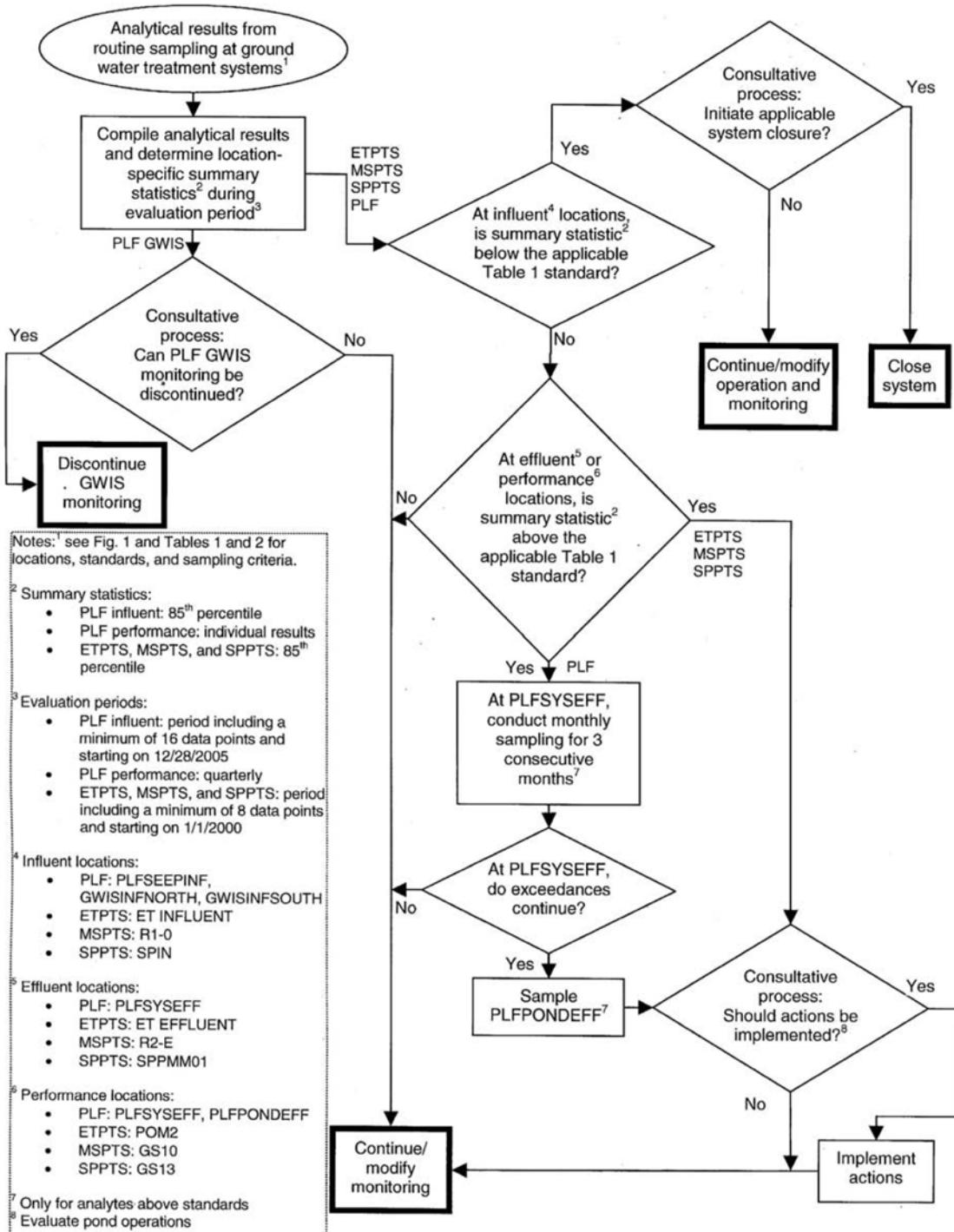
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*Figure 10. RCRA Wells*

## ROCKY FLATS LEGACY MANAGEMENT AGREEMENT

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*Figure 11. Groundwater Treatment Systems*

## ROCKY FLATS LEGACY MANAGEMENT AGREEMENT

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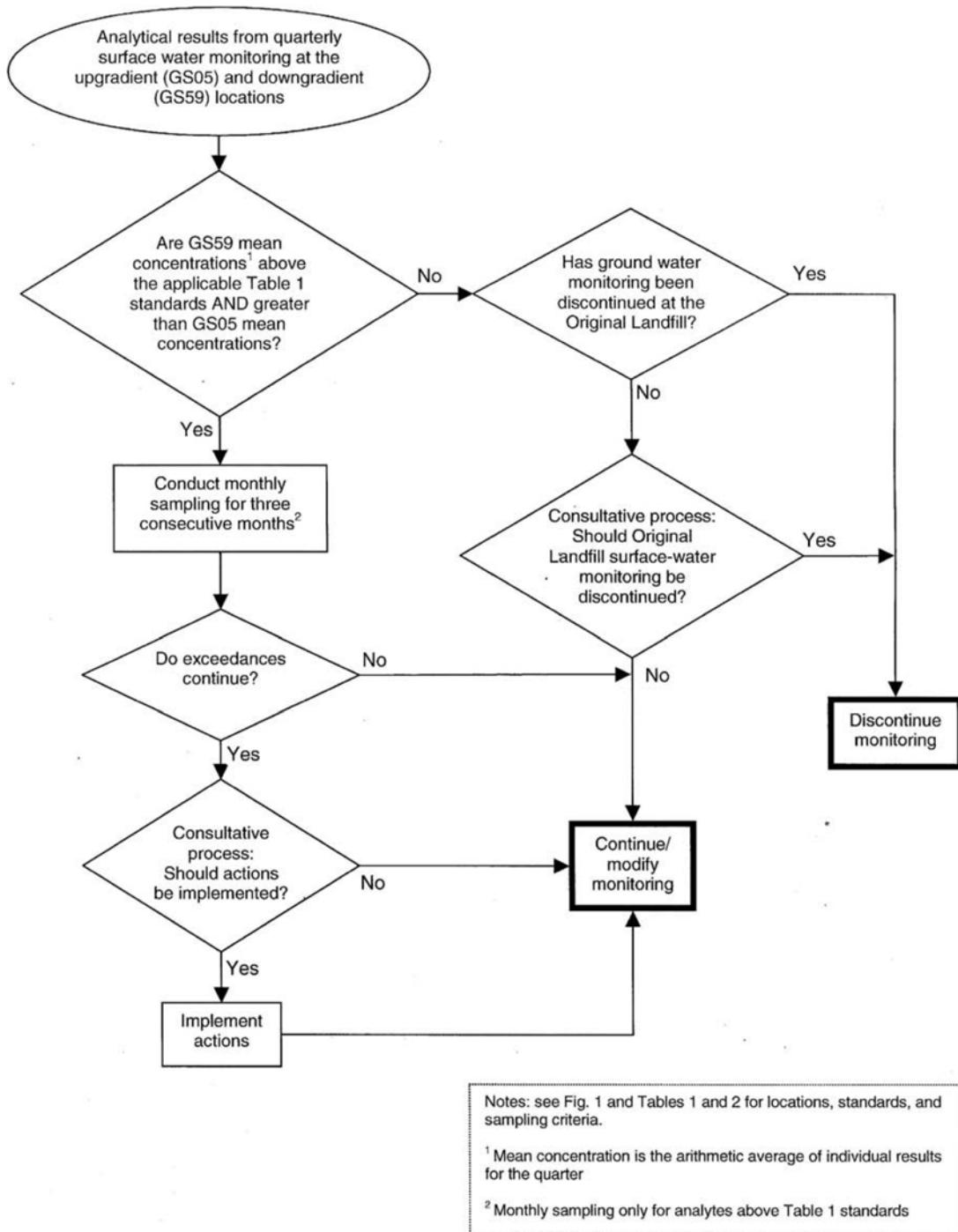
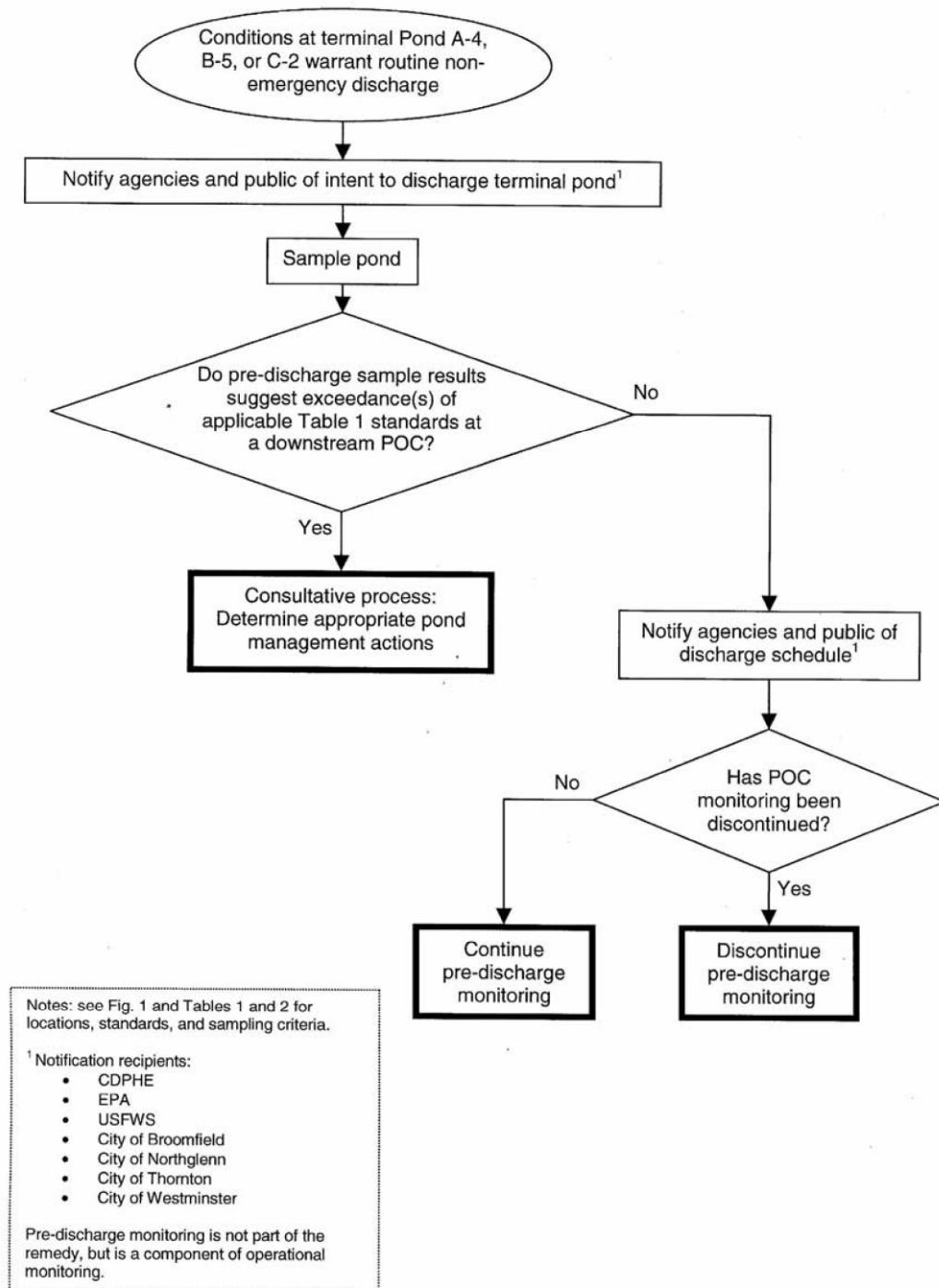


Figure 12. Original Landfill Surface Water

## ROCKY FLATS LEGACY MANAGEMENT AGREEMENT

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*Figure 13. Pre-discharge Pond Sampling*

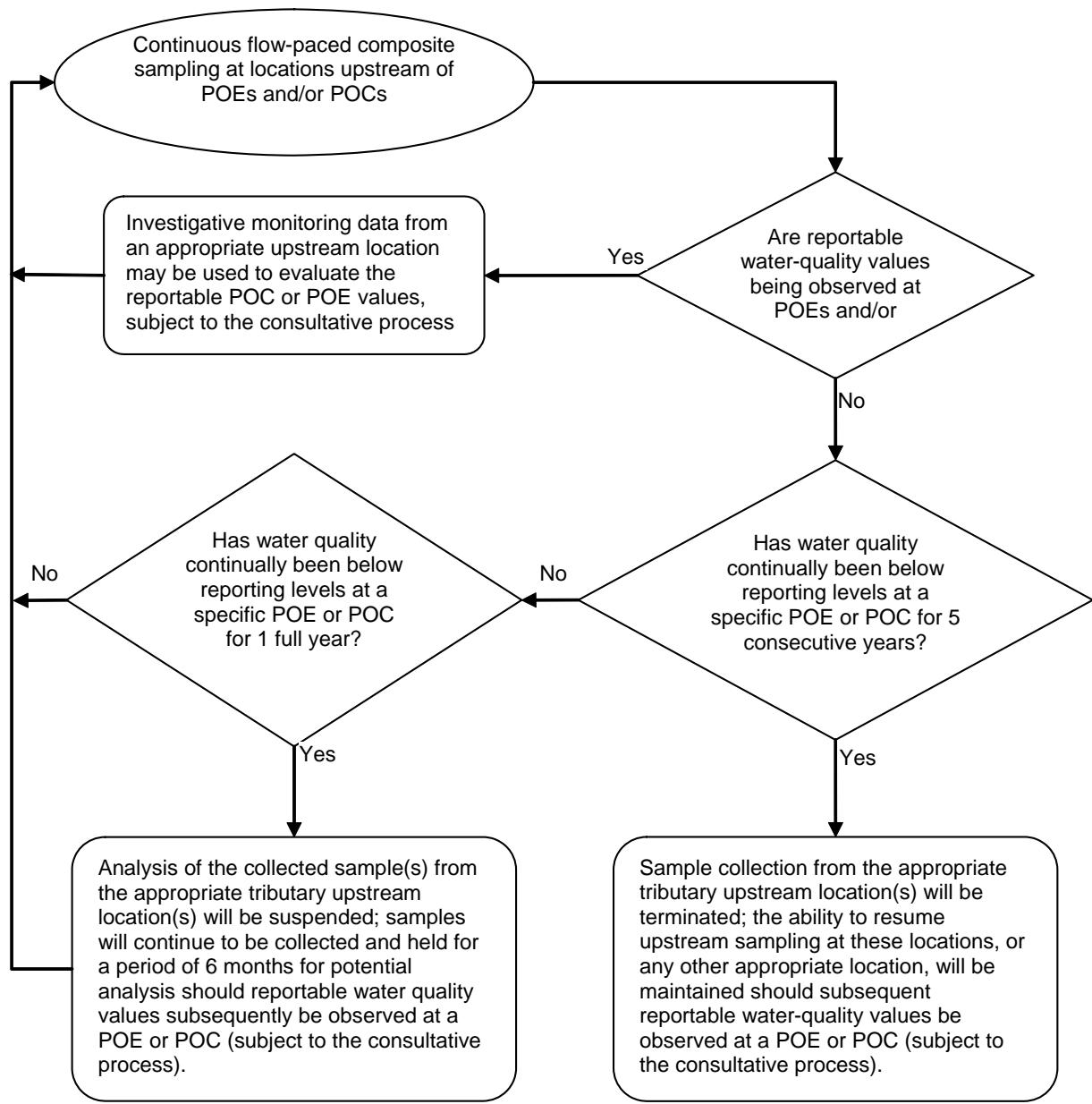


Figure 6-15. Investigative Monitoring Flowchart (from the RFSOG)

## **Appendix E**

### **LANL Report**

***Thermal Ionization Mass Spectrometry Uranium Results  
for October 2007 RFETS Waters***

# Thermal Ionization Mass Spectrometry Uranium Results for October 2007 RFETS Waters

Prepared by: Deborah Norman, Mike Murrell, and David Janecky

## Experimental Approach

Seven water samples were received at LANL and processed for uranium TIMS measurements. Aliquots of the samples were spiked with a  $^{233}\text{U}$  spike, equilibrated by fuming with perchloric acid, and then chemically processed using ion-exchange columns to isolate and purify a uranium fraction. The processed samples were loaded onto triple filaments for analysis by thermal ionization mass spectrometry using a VG Sector 54 mass spectrometer. A chemistry process blank was also run that contained negligible uranium. NIST U standard U960 was analyzed as a QA check of the instrument.

## Results

The sample results are tabulated in Table 1. Table 2 shows the 2007 sample results compared to previous LANL results at the same locations. A plot of  $^{236}\text{U}/^{238}\text{U}$  vs.  $^{235}\text{U}/^{238}\text{U}$  is shown in Figure 1. A plot of  $^{234}\text{U}/^{238}\text{U}$  vs.  $^{235}\text{U}/^{238}\text{U}$  is shown in Figure 2. Plots of sample data within the envelope of natural, depleted and enriched compositions are shown in Figure 3. Table 3 shows calculated fractions of depleted, enriched and natural uranium for this set of sample analyses, while Table 4 shows the 2007 sample calculated fractions compared to previous LANL results at the same locations.

Table 1. New Thermal Ionization Mass Spectrometry Uranium Results

Sample ID	U (ng per g)	(+/-) (%)	238/235	(+/-) (%)	234/238 (e-6)	(+/-) (%)	236/238 (e-6)	(+/-) (%)
<b>GS03</b>	3.71	0.4	149.3	0.3	63.5	0.5	11.9	1
<b>GS10</b>	10.1	0.4	149.5	0.4	62.7	0.5	16.0	0.8
<b>80205</b>	79.2	0.3	137.9	0.3	76.6	0.5	BDL	
<b>10594</b>	103	0.4	139.8	0.3	71.0	0.5	1.5	2
<b>SPP DISC</b>	62.0	0.4	115.8	0.3	84.5	1.0	44.0	1
<b>99405</b>	439	0.4	138.1	0.4	74.8	0.5	BDL	
<b>2547</b>	9.99	0.4	148.0	0.4	63.0	0.5	16.1	0.7

Table 2. Comparison of Current with Previous Results

Sample ID	U (ng per g)	(+/-) (%)	238/235	(+/-) (%)	234/238 (e-6)	(+/-) (%)	236/238 (e-6)	(+/-) (%)
<b>GS03 -02</b>	2.2	5	153	5	62	25	9	8
<b>GS03 -07</b>	3.71	0.4	149.3	0.3	63.5	0.5	11.9	1.0
<b>GS10 -02</b>	9.4	4	153	5	61	25	11	8
<b>GS10 -05</b>	13.2	0.2	157.2	0.1	57.5	0.2	18.6	0.2
<b>GS10 -07</b>	10.1	0.4	149.5	0.4	62.7	0.5	16.0	0.8
<b>2547</b>	9.99	0.4	148.0	0.4	63.0	0.5	16.1	0.7
<b>SPP DISC -02</b>	41	5	128	5	78	25	24	8
<b>SPP DISC-07</b>	62.0	0.4	115.8	0.3	84.5	1.0	44.0	1.0
<b>10594</b>	108	5	142	5	78	25	BDL	
<b>10594</b>	128	5	139	5	84	25	BDL	
<b>10594</b>	132	5	140	5	88	25	BDL	
<b>10594</b>	123	5	137	5	80	25	BDL	
<b>10594</b>	103	0.4	139.8	0.3	71.0	0.5	1.5	2.0
<b>99405 -05</b>	396	0.2	138.0	0.1	74.8	0.2	BDL	
<b>99405 -07</b>	439	0.4	138.1	0.4	74.8	0.5	BDL	

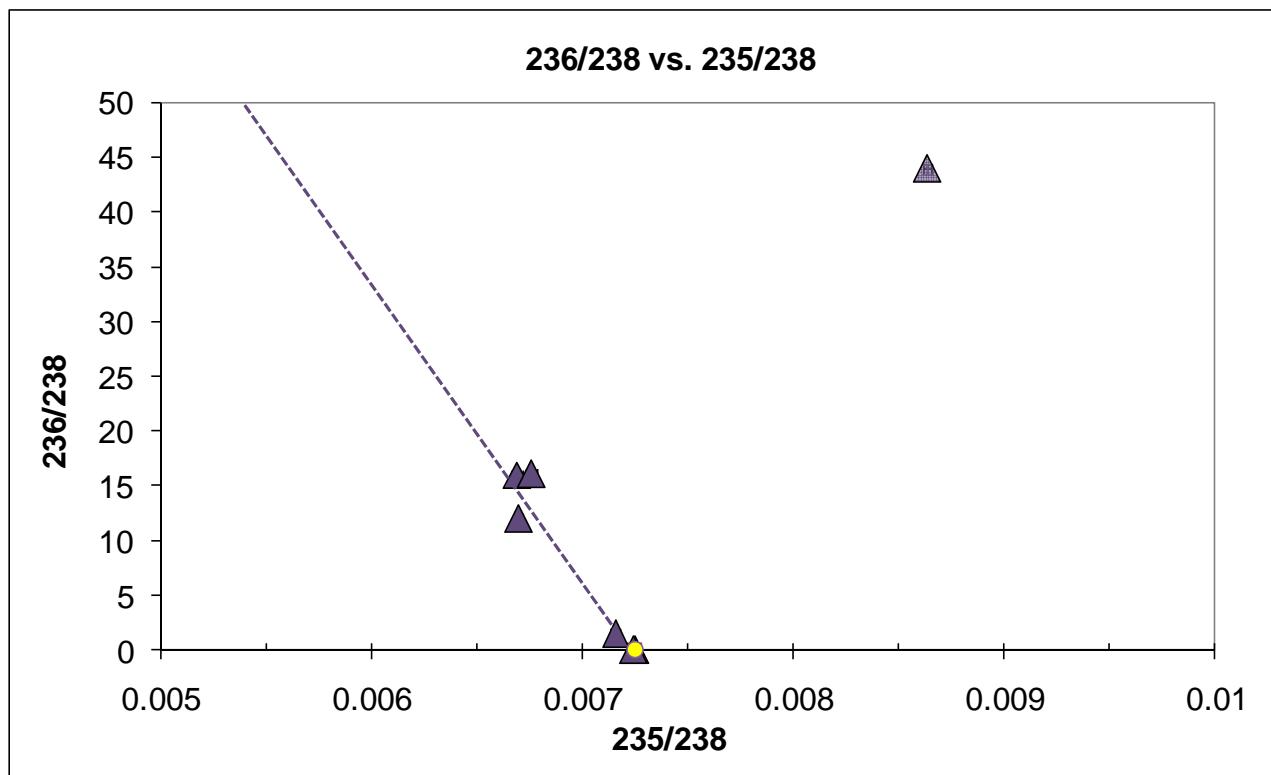


Figure 1. Thermal ionization mass spectrometry uranium results for 2007 RFETS waters. The blue dotted line is a two component mixing line between natural uranium and depleted uranium. These samples generally indicate natural U or the addition of 0-30% of a depleted U component and 0.0-0.1% enriched U component. In contrast, the SPP Discharge location indicates the presence of the addition of about 57% depleted U component and 0.43% of an enriched U component.

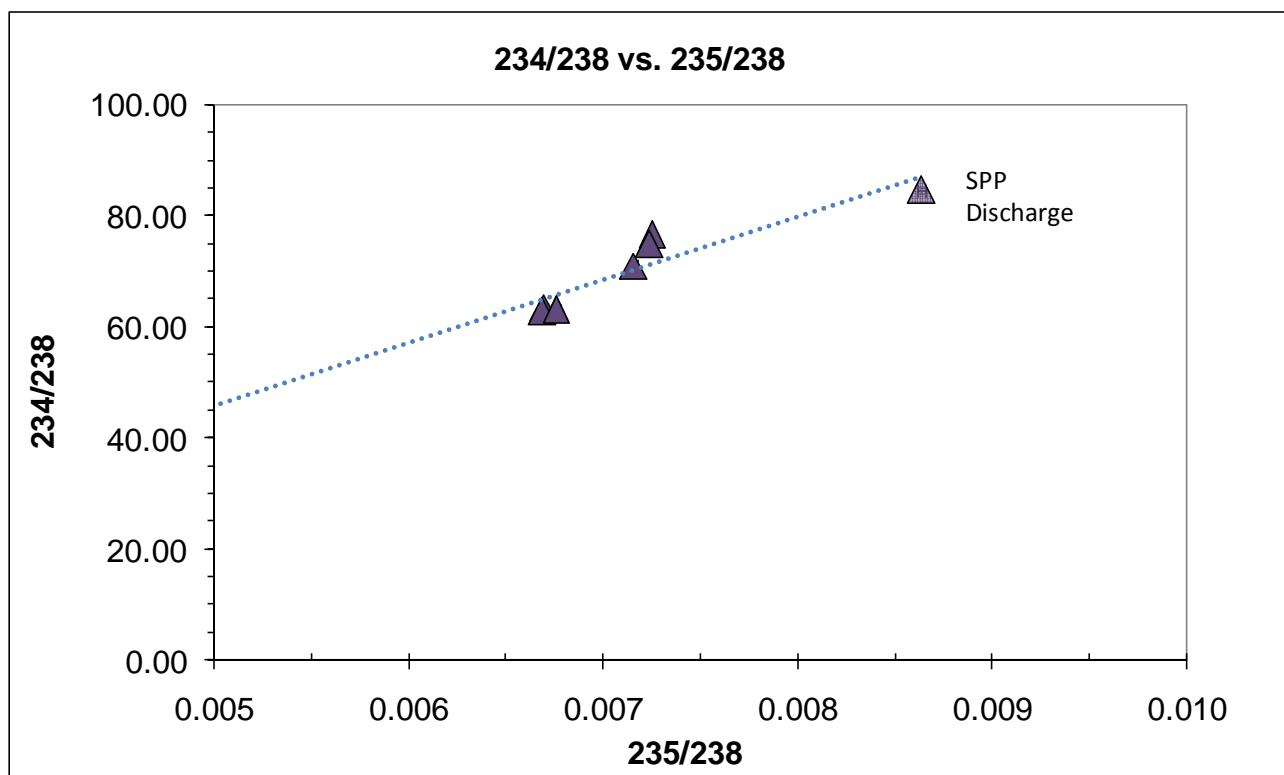
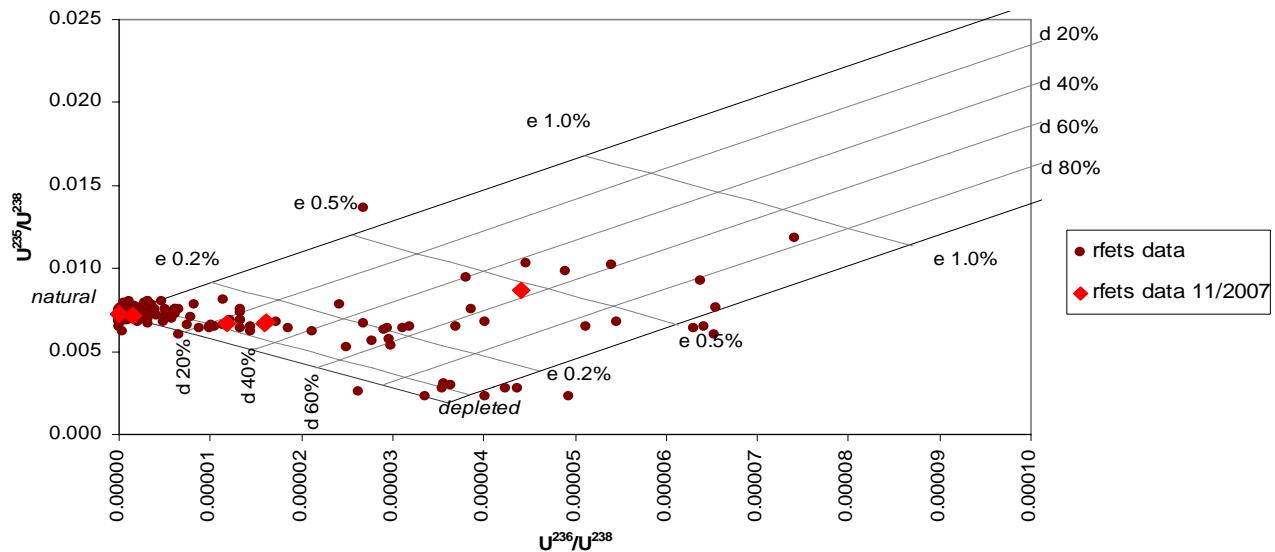


Figure 2. Thermal ionization mass spectrometry uranium results for RFETS waters. The  $^{234}\text{U}/^{238}\text{U}$  results can be used to indicate flow paths and identify end members.

**RFETS AME Uranium Isotopic Analyses**  
**11/2007 + all previous analyses**



**RFETS AME Uranium Isotopic Analyses**  
**11/2007 analyses**

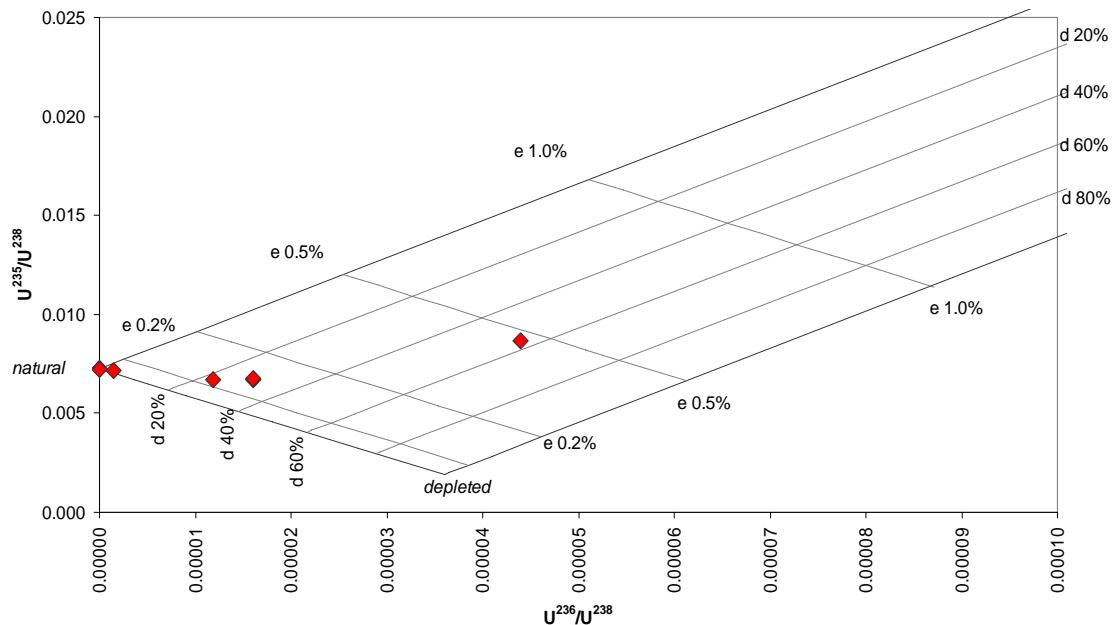


Figure 3. Isotopic results relative to calculated mixing between natural, depleted and enriched Uranium. Upper diagram shows new data from this report, with all previously measured samples. Lower diagram shows only the new sample analyses.

Table 3. Current Calculated Fractions of Depleted, Enriched and Natural Uranium Components

Sample	Location	Easting	Northing	Sample Date	depleted	enriched	natural
GS03	GS03	2093618.4	753645.5	7/9/2007	23.0%	0.07%	76.9%
GS10	GS10	2086741.3	750328.6	7/23/2007	29.4%	0.10%	70.5%
80205	80205	2082324.4	747535.6	9/7/2007	0.0%	0.00%	100.0%
10594	10594	2086746.4	752124.3	9/11/2007	3.1%	0.01%	96.8%
SPP Discharge gallery	SPP Discharge gallery	2085350.1	751764.4	9/12/2007	56.7%	0.43%	42.9%
99405	99405	2085584.8	749862.7	9/12/2007	0.1%	0.00%	99.9%
2547	GS10	2086741.3	750328.6	10/1/2007	29.0%	0.10%	70.9%

Table 4. Comparison of Current with Previous Results

Sample	Location	Easting	Northing	Sample Date	depleted	enriched	natural
80205	80205	2,082,324.4	747,535.6	9/7/2007	0.0%	0.00%	100.0%
15-239	SPP Disc	2,085,339.4	751,751.4	6/18/2002	32.6%	0.23%	67.2%
SPP Disc	SPP Disc	2,085,350.1	751,764.4	9/12/2007	56.7%	0.43%	42.9%
99405	99405	2,085,584.8	749,862.7	8/8/2005	0.1%	0.00%	99.9%
99405	99405	2,085,584.8	749,862.7	9/12/2007	0.1%	0.00%	99.9%
514-005	GS10	2,086,741.0	750,326.0	5/1/2002	22.1%	0.04%	77.8%
GS10	GS10	2,086,741.0	750,326.0	8/11/2005	36.2%	0.10%	63.7%
GS10	GS10	2,086,741.3	750,328.6	7/23/2007	29.4%	0.10%	70.5%
2547	GS10	2,086,741.3	750,328.6	10/1/2007	29.0%	0.10%	70.9%
16-24	10594	2,086,746.5	752,124.3	6/22/1999	1.9%	0.00%	98.1%
21-87	10594	2,086,746.5	752,124.3	12/7/1999	0.3%	0.00%	99.7%
7-120	10594	2,086,746.5	752,124.3	2/7/2000	0.0%	0.00%	100.0%
15-191	10594	2,086,746.5	752,124.3	6/8/2000	0.3%	0.01%	99.6%
10594	10594	2,086,746.4	752,124.3	9/11/2007	3.1%	0.01%	96.8%
514-002	GS03	2,093,622.1	753,639.9	5/1/2002	21.5%	0.04%	78.5%
GS03	GS03	2,093,618.4	753,645.5	7/9/2007	23.0%	0.07%	76.9%

## Discussion

In comparing calculated fraction results, the greatest change is in the SPP Discharge Gallery. The fractions of depleted and enriched U components have increased by a factor of approximately 1.7-1.9 (Table 4), while the total concentration of U has increased by a factor of 1.5 (Table 2). This could indicate that the flow of water with natural U is decreased and/or that the contaminated source is drying out, both of which would increase the proportions of contaminant U component.

Sample 80205 is in the area of the original landfill, where samples with both natural U component and relatively contaminated samples have previously been analyzed.